DOCUMENT RESUME

ED 238 537 PS 013 937

AUTHOR Vosburgh, Miriam Gilson
TITLE The New Zealand Family and Social Change: A Trend Analysis. Occasional Papers in Sociology and Social Welfare No. 1.
INSTITUTION Victoria Univ. of Wellington (New Zealand).
PUB DATE 78
NOTE 255p.; Study is based on Ph.D. thesis, Victoria University.
PUB TYPE Books (010) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC11 Plus Postage.
DESCRIPTORS Birth Rate; Comparative Analysis; *Death; *Divorce; Employment Level; *Family Characteristics; Foreign Countries; *Marriage; Questionnaires; *Social Change; Surveys; Trend Analysis
IDENTIFIERS Australia; Birth Spacing; Birth Timing; *Family Size; Great Britain; *New Zealand; United States

ABSTRACT

Long term trends in non-Maori family formation, growth, and dissolution in New Zealand were investigated with data mainly derived from the statistical reports of government departments. Sources included census reports; vital, justice, medical, and migration statistics; life tables; and official yearbooks. To augment official statistical data, an interview survey was carried out in 1967. This survey was designed to collect information on the family formation patterns of various social subgroupings. Occupational status and fertility level were chosen as bases for differentiating subgroupings. After an introductory chapter describing the study, its setting, and the data and methods used, chapter 2 describes and analyzes trends in marriage patterns. Chapters 3 through 5 focus on aspects of family size, including a description of differential trends within population subgroupings and a comparison of differentials in the United States, Great Britain, and Australia. Chapter 6 provides information about birth timing, birth spacing, and household units. Divorce and mortality trends are described in chapter 7. The concluding chapter describes changes in family structure and discusses social and demographic influences on family formation patterns. Appended are survey questions, coding guidelines, and technical notes on statistical calculations. (RH)

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THE NEW ZEALAND FAMILY AND SOCIAL CHANGE: A TREND ANALYSIS

by

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1978

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Occasional Papers in Sociology and Social Welfare No. 1

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ACKNOWLEDGEMENTS

The following study is based on a Ph.D. thesis written in the Department of Sociology and Social Work of the Victoria University of Wellington. I would like to express my grateful appreciation to my supervisors, Professors John McCreary and James Robb, for their help, patience, encouragement and insight at every stage of the research and writing. My thanks are also due to the Academic staff of the Department who spent long hours supervising interviewers, trouble-shooting and checking interview schedules during the week of the Wellington Family survey, to the thirty-six energetic and persistent Sociology and Social Work student interviewers and to the respondents, themselves. Mr. K. Aldous, Dr. J. Darwin and Mr. D. Kinneborough of the, then, Applied Mathematics Division of the Department of Scientific and Industrial Research generously gave their time and expertise in guiding and conducting the computerized cross-tabulations and statistical analyses. Mrs. Mary Boyd, Reader in History at Victoria University, provided constructive advice towards revising the historical sections in the thesis. My external thesis examiner, the late Dr. Dorothy S. Thomas, also provided appreciated advice on revising the manuscript for publication. Finally, I would like to thank Mrs. Lorraine Wright of the Bryn Mawr College School of Social Work and Social Research for her excellent typing of this monograph.

Although those mentioned above, and others too numerous to mention, provided help and advice, any errors are, of course, mine.

M.G.V.

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CHAPTER I

INTRODUCTION

Description of the Study

The family has been an important social group in all societies throughout history. Its persistence through major social changes which have caused substantial modifications in its form, the roles and relationships of its members and its place in society, has stimulated much interest and inquiry. How do specific social changes affect the family unit and what implications do the changes brought about in the family have for society? This book attempts to provide some answers to these questions for the New Zealand non-Maori family through an exploration and analysis of changes in its structure from the later years of the nineteenth century.

The significance of the family as a social group has been studied in several ways. Important amongst these approaches are studies of the family as a system in itself in which the interaction of members produces a particular pattern of family life and behaviour and shapes the personal development of the young. Another approach identifies the structure of the family, describing the size, age, sex, kinship and other characteristics of the family unit. Because the structure and functioning of a group are closely interrelated, this approach can give valuable insights towards an understanding of both the place of the family in society and the family as a group of interacting members.

The present study follows the latter approach. Although there are

grounds for arguing that our viable family unit is a modified-extended type, because of the strong effective relationships that ordinarily exist with close kin outside the immediate household, the focus here is on the nuclear family, husband and wife with or without children.[1] Trends in the timing and incidence of marriage, in family size, spacing of children and family dissolution through death or divorce, which determine family structure at any one point in time and change the timing of the family life cycle,[2] are outlined for the society as a whole and for some of its social sub-groupings. Descriptions of the changes provide a basis for explanation, inference and further research on the ways in which roles and relationships have changed within the typical family. To take one illustration, it is well documented that a reduction in family size can have a variety of effects. Large families tend towards a higher degree of regimentation of children, for example, sibling relationships are usually more encompassing and provide some of the security that would be attached to the parental-child relationship in a small family and there is normally a greater emphasis on group cohesion and less on individual development.[3] The trends outlined also provide some explanation of the changes in the relationship of the family unit and individual family members to the wider society, an example being the greater opportunity afforded to a mother who completes child-rearing at today's younger age, to participate in life outside the family. However, the

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[1]A brief analysis of relationships between the nuclear family and its kin is found in Miriam Gilson, "The Changing New Zealand Family," in Association for the Study of Childhood, The New Zealand Family and Child Development (Wellington: New Zealand University Press, 1969), pp. 72-75.

[2]Family Life Cycle refers to the sequence of stages through which a typical nuclear family passes; the stage before a child is born, the child-bearing and child-rearing stages and the period after the last child leaves the parental household.

[3]James H. S. Bossard and Eleanor S. Boll, The Sociology of Child Development, 4th ed. (New York: Harper and Row, 1966), pp. 38-42.

implications of the changes in family structure for changes in behaviour are not fully explored in the present study. While many suggestions along these lines are made, the main focus is on the delineation of trends in family structure and on attempts to explain them.

Explanations follow the theory that there are patterns of marriage, child-bearing and family dissolution which are characteristic of a society at different stages of social and economic development.[4] Within this, demographic rates affecting family structure will vary with changes in population composition and socio-economic conditions. Additionally, cultural values and beliefs will have some independent influence, but their potential for producing family patterns inconsistent with social development and conditions is limited in two ways. First, cultural ideas tend to change in a direction consistent with changes in socio-economic organization. Although values and beliefs often change more slowly, they cannot become too antagonistic to existing conditions without severe disruption occurring in a society. While such crises do occur, pressures towards the maintenance of social stability normally prevent them from happening with great frequency. Second, while antagonistic values may exist at certain times, the constraints of socio-economic circumstances will often prevent their actualization. For example, while early marriage may be considered an ideal, an economic recession, accompanied by high unemployment rates and lack of job security, is likely to cause delays in marriage.

It is postulated, then, that the levels of the demographic rates

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[4] A specific example of such a theory is the Theory of Demographic Transition which postulates that as a country modernizes, it passes from a stage where birth and death rates are high, to a transitional stage where death rates decline and birth rates remain stable, to a final stage where both birth and death rates are low.

determining patterns of family formation, growth and dissolution are largely influenced by socio-economic stages and conditions so that explanation of demographic changes should be sought in other social change. However, it should be remembered that this is not a one-way process. The association between other social phenomena and the demographic rates which, over time, shape family structure are of a reciprocal nature. Changes in social conditions may affect marriage, fertility, migration or mortality rates and the changes produced may reflect back on the original social change influencing a reinforcement or modification, or, again, they may provide a basis for change in other social conditions. The further changes may then influence demographic rates and so on in continuing process. This is a simplified model. A great variety of influences may be operating at any one time, but even more important, the nature of the influence of social change on demographic rates is often different from the reverse influence. Social change can be a direct and immediate determinant of demographic change, while the latter's usual effect is to establish new behavioural boundaries within which social change is more or less likely to occur than within the former limits. For example, in a society where the birth rate is largely under voluntary control, an economic recession may effect a direct and almost immediate reduction in fertility rates, while increasing population growth rates leading to overpopulation in a society with a specified type of socio-economic organization are unlikely to influence rapid change in organization or even conditions, though these effects will occur in time, failing the adoption of other solutions to the pressure. However, regardless of differences in operation, there is no doubt that changes in demographic rates can both influence and be influenced by other social change. As already stated, this study is focused mainly on one part of the process, the influence of

change in socio-economic structure and conditions on family patterns.

As a basis for later explanation of changes in family formation patterns, the description of trends is prefaced by a brief account of some aspects of the social development of New Zealand. Aspects selected are those with a potentially strong influence on family structure, including population size, composition and distribution, socio-economic stages and conditions, technological advancement and major societal disruptions.

An Outline of New Zealand Social Development

1850 - 1900:

In 1850, New Zealand was still a very new British colony consisting of several small, scattered and poorly inter-connected settlements with strong local loyalties. It is estimated that the non-Maori population at this time numbered about 25,000, the Maori population outnumbering them by two to one, an advantage lost by the end of the decade. Violent Maori-Pakeha struggles over land acquisition had already begun and a period of war from 1863 to 1872 slowed economic progress in much of the North Island, while the South continued a pastoral and agricultural development, its economy being further stimulated by gold discoveries in Otago and the West Coast in the 1860's. Throughout this period, immigration to New Zealand continued, receiving a special impetus from the gold discoveries and then in the 1870's, from a large-scale government-assisted migrant programme. In the early 1880's, the non-Maori population reached half a million and, although an economic recession brought a temporary halt to gains from migration in the later 1880's and early 1890's, the population continued to grow through natural increase and a resumption of migration gains to reach nearly three-quarters of a million people in 1900.

The age-sex composition of the immigrant groups was typical of that

in movements to a new and distant settlement, including a disproportionately large percentage of younger men. At the time of the 1861 census, there were ten males for every six females in the non-Maori population, an imbalance to which the gold discoveries made a substantial contribution, and it was not until the turn of the century that something approaching a normal sex composition was attained, ten males to nine females. Men dominated much more heavily in some communities than others; but in farming areas and even in settled towns, men tended to be in the majority and this affected attitudes, activities and, as will later be explored, marriage patterns.

New Zealand colonists came overwhelmingly from the British Isles and overseas British settlements. They brought with them British attitudes, interests and behaviour patterns and these were slanted towards those of the British working class. Colonizing associations had made conscious attempts to reproduce the British social class distribution but had largely failed, as has generally been true of efforts to transplant a complete social structure.[5] This is not altogether surprizing in the case of voluntary migration, as it is, or seems, more advantageous or more feasible to people in some social strata than to those in others. Members of the highest and lowest social classes were only lightly represented amongst New Zealand immigrants. As J. C. Beaglehole expressed it: "The colonists of New Zealand came mainly from that struggling and expanding class, the Respectable Poor, as distinct from the mere proletarian on the one hand and the thoroughly successful artisan on the other . . . ."[6] Consequently, the majority of the

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[5]Ever within countries, this has proved difficult. For example, attempts to produce a balanced occupational structure in the British New Towns, created since 1946, have never been completely successful.

[6]New Zealand: A Short History (London: George Allen and Unwin, 1936), p. 48.

population were relatively socially homogeneous and because New Zealand offered comparatively few opportunities for the differential acquisition of wealth, no strong class divisions developed in the new country. In the early period, social differences certainly existed between the English gentry, represented by such people as the founders of the colonies, high status military officers and some few men of wealth and education, and the other migrants, but the seeds of a diminishing difference were already present in the numerical dominance of the ordinary worker and his reasons for having migrated. From the beginning, it was clear that what the colonists were seeking were better living standards and greater economic security. In a country with relatively limited resources, like New Zealand, these aims led to a pressure towards an equal division of opportunities and financial rewards, so that equality and security became, and have continued to be, dominant New Zealand values.

Politically, New Zealand was firmly linked to Britain. Her early laws were British laws and though granted Responsible Government in 1852, her legislative and judicial bodies remained subject to British parliamentary supervision. In view of the poor transport and communication amongst the various settlements and the strong local interests which had developed, provincial governments remained the most important political bodies even after the constitution of a national government in the 1850's. It was not until considerable advances in unifying the country had been made through improvements in transportation that the Provincial parliamentary institutions were abolished in 1876. There was, even then, some strong opposition to this move, which was instrumental in helping to promote the dominance of the central government to become an important feature of New Zealand society. As the government grew in strength, it became freer of controls from Britain; and,

by the time New Zealand became a Dominion in 1907, the step was simply a formality as far as internal government was concerned.

The economy was, and to a lessening extent has continued to be, dependent on British capital, markets and world prices for primary produce. This dependence was clearly manifested in the severe economic depression, clearly apparent by 1879, when export prices began to fall rapidly and government borrowing, which had been heavy in the 1870's, was no longer possible. The foundations of a continuing pastoral economy were laid early in New Zealand history with wool as the vital export. The introduction of refrigerated shipping in 1882 reinforced the development of pastoral farming by expanding the range of exportable products. Mining and exploitative industries, also important sources of overseas income in early years, contracted gradually through the nineteenth and early twentieth centuries and have continued to diminish in importance. Small-scale urban industry was gradually developed, receiving an impetus during the economic expansion in the 1870's, and towns grew in numbers and size. One historian has noted that: "In 1881, of a population of some 490,000, over 190,000 lived in 65 boroughs. New Zealand was beginning to assume its present-day pattern--a large urban population dependent on economically vital farming interests."[7]

These, then, were some of the characteristics of early New Zealand society. There was ongoing change through the period in response to the opportunities and constraints of the country and the dominant values of the settlers. Some of the legislation, such as the Education Act of 1877 which provided for free and compulsory primary schooling for all children, demonstrated the pressure towards the equalization of opportunities, which was felt from early colonial times. However, it took a period of economic adversity to transform many of the social dissatisfactions related to the

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[7]W. H. Oliver, The Story of New Zealand (London: Faber & Faber, 1960), p. 122.

existence of privilege and lack of security into the social legislation passed in the 1890's.

It has already been noted that expectations of better living standards and greater economic security were major reasons for migration to New Zealand. Settlers had turned earlier to provincial governments and later to the national government for help in reaching these goals. Apart from the extension of credit facilities by private lending institutions not domiciled in New Zealand, alternatives to government were notably lacking. There was no large and powerful wealthy elite willing to supply resources for social development; there was no large-scale domestic private industry and, due to the individual nature of much of the migration, most people did not even have an extended family group to depend upon for opportunities and resources. When the boom period of the 1870's passed into a time of economic adversity in the 1880's, pressures on government to legislate better access to land ownership, to improve labour conditions in the cities and to provide some measure of social welfare steadily mounted. The emergence of trade unions as a significant influence on national policy and the election of a new Liberal Party government in 1890 saw the introduction of social and economic legislation to help satisfy these demands. In the earlier part of the decade, during the years of continued depression, emphasis was on relieving its adverse social consequences and encouraging economic diversification, while in the years of economic recovery vigorous measures towards economic development were formulated and implemented. Major legislation comprised the introduction of a graduated tax on land and urban income, with the aim of discouraging the holding of large estates and giving some relief to the urban poor. Provision was made for the State to re-purchase land from private owners and to subdivide it for closer settlement, while a third land-related act provided

farmers with loans at lower interest rates than were available from private lending institutions. Urban labour was regulated through factory and other acts specifying conditions of employment and work, and an innovative Industrial Conciliation and Arbitration Act set up district conciliation boards with equal representation from Employers and Industrial Unions to advise on solutions to disputes. Unresolved disputes could be referred to an Arbitration Court, a tribunal including a Supreme Court Judge and representatives from both employers' and workers' organizations. Steps towards social security were taken through the passing of an Old Age Pensions Act. Additionally, women's rights received early recognition through the granting of female suffrage and the removal of discrimination against women in legal grounds of divorce.

These laws, demonstrating an advance towards social equality and security, were also indications of a growing independence of British influence. The Industrial Conciliation and Arbitration Act was unique and many of the other acts pre-dated similar legislation in Britain. An important example was the early granting of female suffrage in 1893. True, this was heavily influenced by the heroic efforts of prohibitionists who had expected women to vote against the sale of liquor, but even so it was a recognition of the relatively high status of women and it stimulated a further rise in status. This had implications for family formation patterns, as will later be discussed. British control was disappearing and new migrants were becoming a less important source of influence on New Zealand society; for, although substantial immigration from Britain continued through the first decade of the twentieth century, new arrivals were becoming an ever smaller proportion of the population. From the early 1880's, natural increase had provided a considerably larger share of population growth than had migration.

In the earlier part of this period, then, New Zealand society was greatly influenced by that in Britain. The majority of her settlers had been born there and had brought with them British attitudes, interests, behaviour patterns, laws and institutions. However, they also brought desires for a better life, creating pressures towards equality and security as have been partially demonstrated through the detailing of the social and economic legislation of the 1890's. By that time, New Zealand and British society had diverged markedly and New Zealand was set upon a course that she was destined to follow in a somewhat fluctuating fashion in the twentieth century.

1900 - 1940:

At the time of the 1901 census, the non-Maori population was ennumerated at 770,304 persons, by 1936, it had increased to 1,491,484. From 1901 to 1911, the average annual rate of increase was moderately high, 2.6 percent. Although the birth rate continued a gradual decline which had begun by the 1880's, it was still ranging around 2.6 percent a year in this decade, the death rate was declining, and gains from migration added an annual increase of about one percent. It should be noted, however, that by this time the majority of the population were New Zealand born. Although there was a marked decrease during World War I, significant gains from net migration continued until towards the end of the 1920's, and then a net migration loss was recorded during several of the depression years in the 1930's. Migration did not become an important source of population increase again until after World War II. The decline in the birth rate continued through the 1920's and 1930's, reaching the low point of 1.7 percent in 1936, when a slow recovery began. In line with these trends, the average annual increase of the non-Maori population fell to just over one percent in the decade, 1926-36.

The economy continued to be highly dependent on sheep farming, but dairying was gaining in importance. The possibility since 1882 of exporting frozen meat and dairy products increased the scope of the former and stimulated the latter. Dairy farming was established largely through the use of forest and swamp areas in the North Island, and this phase of development was largely completed by the 1920's.[8] It was closely linked with the pattern of urban growth. Throughout the period 1901-1936, the proportion of the population described as urban, that is, as resident in a town of one thousand or more people, increased from 45 to 59 percent. In the first decade, small towns, as well as large, experienced a relatively rapid growth and new country boroughs and market towns were established to cater for the more closely settled rural population. The importance of market and service towns was maintained throughout the following decade. However, due to such factors as the stabilization of land settlement patterns by the 1920's and the improvement and expansion of road transport which affected both the movement of people and methods of marketing farm produce, many smaller towns began a relative decline after this time, and the significant population movement was to the larger towns and cities.[9] An associated development was the expansion of urban manufacturing and commerce. Although even at the present time New Zealand could not be regarded as a highly industrialized country, it is urban rather than rural, with the great majority of the working population engaged in urban occupations. This pattern was well established by the 1930's.

The effects of the land legislation of the 1890's, the expansion of farming and the recovery of export prices led to a rising prosperity for most

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[8]S. H. Franklin, "New Zealand's Population in the Welfare Era, 1901-61," in Land and Society in New Zealand, ed. R. F. Watters (Wellington: Reed, 1965), p. 160.

[9]Franklin, p. 165.

sections of the population in the early years of the twentieth century. The relative contentment of farmers, together with improved conditions for urban labour and the ability of its multiplying unions to win wage increases through Arbitration Court awards in the better economic situation, resulted in a period of industrial calm. This was to disappear, however, as economic conditions began to fluctuate and to expose the divergent interests of farmer and urban workers. Urban wage increases were costly to both the farmer and employer; and, for several years after 1908, representatives of these groups engaged in bitter struggles with the unions, even finding a way of making the Arbitration Court work to their sole advantage. In 1913, these struggles culminated in a general strike which was broken decisively by farmers and employers with some government support. The conflict has been described as a "class war of a brief but savage kind, fought not with dynamite and bombs but with stones and bludgeons."[10] Neither the conflict nor its results could be said to have favoured either greater equality or security, and it was not until later in this period that further advances were made towards the achievement of these goals.

The passing of new social welfare legislation had slowed down after 1900, but between this date and the passing of a comprehensive Social Security Act in 1938, financial benefits were extended to widows, Maori, war veterans, miners and the blind. In 1926, a family allowance of two shillings a week was introduced for each child after the second. All these benefits were subject to a means test. In 1925, a Child Welfare Act established a special section in the Department of Education to care for certain groupings of handicapped, deprived and delinquent children. This section, now the Child Welfare Division, is empowered to give financial assistance to needy families with young children where the social security benefits for which they qualify

[10] Oliver, p. 167.

are not sufficient to maintain them adequately. Children's Courts were also set up under this Act. Unemployment relief was granted during the economic depression in the 1930's. Significant advances were made in health provisions. An important event in this area was the establishment in 1907 of the Royal New Zealand Society for the Health of Women and Children, or Plunket Society. The society still provides nursing services for babies and advice and assistance to mothers with young infants. Other developments in the health field were the establishment of, or extensions in, school medical and dental services and an expansion in the functions of the Department of Health. Education was extended by the establishment of technical schools at post-primary level and secondary education became free in progressive stages. Post-primary education for country children had been provided by a system of District High Schools, set up under the 1877 Education Act. Initially, these were fee-paying schools; but, in 1901, a regulation was passed granting funds to the governing boards of the schools which elected not to charge fees. One effect of the use of this provision was to offer special encouragement to country children to gain a post-primary education. Its measure of success, and that of subsequent steps to ensure that children in the country had educational opportunities comparable to those in the town, have helped to minimize social differences between the urban and rural populations.

This period in New Zealand history was marked by two major world events, World War I (1914-18) and an economic depression of drastic proportions (from the late 1920's to the mid-1930's). The loss of men in the war was severe, some seven percent of the male population of military age, causing significant family disruption and changing the age-sex composition of the population sharply enough to influence fertility and, even more markedly,

marriage patterns, as will later be described. The world-wide depression was marked in New Zealand by extensive unemployment, cuts in salaries and wages, in education and in social benefits, and by decreases in marriage and birth rates which are still affecting population structure and which stimulated two major enquiries into population trends and the possibilities of increasing population growth.[11] Public reaction was similar to that demonstrated in the earlier economic depression in the 1880's. Pressures for social and economic reform mounted, and a second path-breaking series of social and economic measures followed the inception of New Zealand's first Labour Government in 1935. Briefly stated, these restored salaries and wages, increased State Housing loans, introducing long-term loans at low interest rates, began an extensive construction of State houses for rental, guaranteed prices for some primary produce and regulated industry through import selection and exchange controls. The Social Security Act of 1938 increased benefits for the unemployed, invalids, widows and orphans. Universal superannuation and maternity benefits were introduced. Medical benefits included free hospital and general practitioner services and free prescribed medicines. A means-tested family allowance, initially granted for first children only, soon became payable for all children and the means test was dropped in 1946.

The economic measures were designed to safeguard the economy by bringing it under closer Government control, the main aim of the social legislation was to protect families and individuals from inadequate living standards. It is difficult to assess how far this legislation, alone, achieved these aims, as it was accompanied by another change which worked in the same direction. This was a general economic recovery, due largely

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[11] G. N. Calvert, The Future Population of New Zealand: A Statistical Analysis (Wellington: The Treasury, 1946, mimeographed). Report of the Dominion Population Committee, 1946 (Wellington: Government Printer, 1946).

to a rise in export prices, and stimulated further by the industrial demands of World War II.

This period, then, was one in which the New Zealand population increasingly outnumbered immigrants, when the urban population outnumbered the rural, when social and economic insecurities and inequalities were reduced, often after considerable conflict, and when the National Government greatly extended its control over large areas of social and economic life.

1940 - 1966:

It is probably impossible to establish a precise date for the beginning of what would be recognized as modern New Zealand society, one which has gone far to justify its image as a Welfare State. There is little doubt that the social and economic changes of the late 1930's were a definitive influence. On the other hand, it is difficult to predict how far-reaching the changes would have been had not World War II intervened, stimulating a strengthening of central planning and controls and further changes in economic conditions. However, regardless of when it began, the modern period has had its own social characteristics.

The non-Maori population increased by just under a million over the period 1936-66, to approximately two-and-a-half million persons. The average rate of population increase climbed in the 1940's and, during the 1950's, was slightly over two percent a year, a high rate for an economically advanced country, and which resulted from moderately high birth rates sustained from 1946 to 1961, a low death rate, and a net migration increase of some 0.5 percent a year. This net migration rate continued until 1966, but the non-Maori birth rate declined markedly from 25.5 per 1,000 population in 1961 to 21.1, in 1966. The rural birth rate had always been higher than the urban; but, during this period, the difference lessened; and this change, together

with continued rural-urban movement and the absorption of most overseas migrants into the cities, had the effect of increasing the urban population from 59 percent of the non-Maori population in 1936, to 77 percent in 1966. It was the larger towns and cities that grew most, hastening a process of suburbanization with the adjustments inherent in the establishment of new housing developments, new political jurisdictions, and an increased separation of home and work-place. The rapid population increase was also responsible for heavy pressures on housing, educational facilities, public utilities and a variety of other services.

Farming continued to be the main basis of the economy, with pastoral and agricultural products the chief sources of overseas income. However, mechanization and other changes in methods reduced still further the percentage of the population engaged in farming. The percentage had been decreasing over the century and by 1966 comprised only 15 percent of the male working population. Two main developments ensured employment for the growing urban population--an increase in the processing of primary products before export and the growth of a variety of secondary industries, protected over much of the period by a system of import controls and producing goods largely for the domestic market. Supported by an expanding economy, service industries also developed rapidly. Although the economy was narrowly based, New Zealand's gross per capita product placed her amongst the more economically developed countries, as shown in the following ranking based on statistics for the late 1950's. (See page 18)

While the economy was expanding after World War II, there was an unusually small proportion of the population in the younger work-force ages, due to the low birth rates of the later 1920's and the 1930's. The proportion would have been smaller still had not part of the deficit been made up

Selected Countries Ranked by Gross National Product per Capita. (U.S. Dollars)[12]

U.S.A.	2577
Canada	1947
Sweden	1380
Australia	1316
New Zealand	1310
United Kingdom	1189
France	943
U.S.S.R.	600

by substantial immigration.[13] The proportionately small number in the work-force ages, together with demands for more goods and services stimulated by the growth and relative affluence of the population and implementation of Government economic and employment policies, led to a virtually unbroken period of full employment until the end of 1966. The same conditions led to an increase in employment opportunities for women, especially in the larger cities where expanding industry needed their labour. Ease in obtaining work and the feeling of security engendered by the full employment conditions and supported by comprehensive social security measures, were formative influences on attitudes and behaviour patterns, especially those of the younger members of society who had not experienced the pre-war depression. This will be later discussed as it relates to family formation patterns.

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[12]Abbreviated from Frederick Harbison and Charles A. Myers, Education, Manpower and Economic Growth (New York: McGraw-Hill, 1964), pp. 34-38.

[13]Fuller accounts of the New Zealand population changes since World War II and their social and economic implications are found in Miriam Gilson, "Population Growth in Post-War New Zealand," and "Women in Employment," in Social Process in New Zealand, ed. John Forster (Auckland: Longman Paul, 1969), pp. 29-48 and 183-197.

Although the value of social security benefits was eroded to some extent through such factors as inflation, during the period 1940-66, they did present the existence of clearly inadequate living standards. On the other hand, a significantly wealthy class did not emerge, reflecting, in part, the relatively even distribution of limited resources by direct and indirect government control. The virtual absence of very low and very high incomes resulted in a narrower income distribution than that in many other economically advanced countries.[14] And while income differentials between occupational groupings were relatively small, there was a broad income spread within groupings, a factor which limited the formation of clearly separate social strata along occupational lines.[15] Class differences between the various occupational groupings were further obscured through the effects of a comparatively high rate of social mobility, facilitated by a broad availability of opportunities for advancement and for interacting with representatives of all sections of the population. For example, New Zealanders overwhelmingly attend State schools, have access to inexpensive University education and large residential areas segregated by socio-economic status are virtually absent. These conditions which have contributed to a movement between social strata have also tended to reduce differences between them, and the clear visibility amongst strata which they have promoted has had the effect of widely diffusing attitudes, interests and opportunities. So that, while social strata based on variations in income, education and occupation can certainly be distinguished, the differences between them have tended to be slighter and the divisions less definite than in many countries at comparable stages of development.

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[14] A comparison of New Zealand, Australian and United States income distributions is found in: Cora Vellekoop, "Social Strata in New Zealand," in John Forster, ed., pp. 237-238.

[15] Vellekoop, p. 239.

As differential by socio-economic status has been minimized, so has social difference by urban or rural status. The social similarity of urban and country dwellers derives from a variety of conditions including comparable educational opportunities, economic equality and security and frequency of contact. The last has been sustained through family and friendship connections, some of long-standing and some more recently established through the continuing rural-urban residential movement, particularly of youth and the retired. Further, the differences between rural and urban settlements have been much less marked in New Zealand than in many countries. Even our largest cities, with the possible exception of Auckland, have been comparatively small-scale, not complex enough to sustain great variety in living patterns and still relatively comprehensible to in-migrants from country areas.

One marked characteristic of modern society, which has been suggested in the foregoing discussion, should be more explicitly mentioned. This is the considerable expansion in State activities which has occurred. Although this trend is common to all modern industrialized societies, it is more advanced in New Zealand than in most. Further, administration of government functions in New Zealand is strongly centralized. Provincial governments have long been abolished, local councils have a strictly limited area of authority and the numerous ad hoc boards and official committees have highly specialized functions. All major policy is shaped in Wellington and administered by government departments whose head officers are located there. The centralized structure has led to a high level of uniformity throughout the country and increased still further the strong dependence on a central body

for provision of resources, direction and administration.[16]

In summary, the period 1940-66 was marked by substantial population growth, economic advance, a large measure of economic security, a relatively high degree of social and economic equality leading to a minimization of social differences in the population, and a comparatively high level of centralized State control.

This outline of some of the changing characteristics of New Zealand society to 1966 will be used to help explain changes in patterns of family formation, growth and dissolution, as these are described and analyzed in the following chapters. While these patterns are not fully described for the period after 1967, it should be noted that several important social changes have occurred between that date and the mid-1970's. Population growth rates have declined with a lower birth rate and a decrease in migration gains mainly attributable to losses of population through net migration during an economic recession in 1967-69. Economic difficulties have mounted, causing national concern and a search for new directions. Social security provisions have been subjected to intensive scrutiny, new social legislation has been passed and existing provisions revised. In short, New Zealand seems to have entered a new social phase which is, in its turn, affecting family structure.

Data and Methods

Data for the study of trends in family formation, growth and dissolution were derived as far as possible from the statistical reports of

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[16] Discussions on the desirability and possibilities of decentralizing the administration of government functions are found in J. L. Roberts, ed., Decentralization in New Zealand Government Administration (Wellington: New Zealand Institute of Public Administration, 1961).

New Zealand government departments. Sources included reports on censuses, vital, justice, medical and migration statistics, life tables and official yearbooks. These reports on the population contain a wealth of information on the timing and incidence of marriage, and rates of fertility, mortality, migration and divorce from the second half of the nineteenth century when New Zealand was still a young colony. They have, however, certain limitations as a data source for the present type of study, some of which are characteristic of the official statistics of most countries, others, unique to New Zealand.

One major problem arises from the changing ways in which data for the Maori and non-Maori populations have been recorded. For a study of non-Maori families, the resultant difficulties relate to a recent period, as the number of tabulations for total population only has been increasing since the early 1950's. It has become possible to include Maoris because they are now subject to the same requirements related to the census and the registering of vital statistics as the non-Maori population. This was not always the case. Before the 1951 Census, a special and simplified schedule was used for the bulk of the North Island Maori population; until 1952, Maoris were not subject to the same laws governing marriage and its registration as the non-Maori population; until 1962, births and deaths of the Maori people were recorded separately and fewer details were required. It is now official policy to publish tabulations of population statistics for the total population, but some information is still given separately for Maoris, and in some other cases it is possible to make reasonable assumptions on which to base a Maori/non-Maori division. It has generally been possible to abstract figures for the non-Maori population in this study, but occasionally data for the total population have had to be used.

The most serious gap in census statistics was a complete lack of information on fertility over the last fifty years. At the Censuses of 1911, 1916 and 1921, women were asked how many children they had borne, and responses were tabulated by age of woman and duration of marriage. From 1926 to 1966, however, census questions were confined to dependent children, those under sixteen years of age, data quite inadequate for a study of completed family size and birth spacing. The three fertility census reports showed the changes in average number of births over a period of consistent fertility decline. Then there was a gap in the documentation of fertility trends on a national basis, which is now partially filled by two research studies. The first is a detailed vital statistics study on the timing of births and average completed family size by single-year marriage cohorts, 1913-36.[17] The second is a calculation of the total completed fertility of marriage cohorts, 1936-46, using Vital Statistics tabulations of births by age of mother and adjusted census data.[18]

Finally, the official statistics, in New Zealand as in most countries, do not contain information on the family patterns of social subgroupings of the population. These data were regarded as essential for two main reasons. First, the identification of social characteristics or clusters of characteristics which are associated with variations in family patterns, the strength of the associations and their changes over time, is a necessary step toward describing the range of variation in a society at any one time and assessing changes in the range. Secondly, this knowledge

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[17] E. G. Jacoby, "A Fertility Analysis of New Zealand Marriage Cohorts," Population Studies 12, 1 (1958): 18-39, and "Some Demographic Observations on First Order Births in the Light of the Cohort Approach," The Economic Record 37, 79 (September 1961): 308-19.

[18] K. G. Basavarajappa, "Recent Trends and Patterns of Non-Maori Fertility in New Zealand," Journal of Biosocial Science 1 (1969): 101-08.

can provide leads to explanations of changing patterns through comparisons of trends amongst subgroupings and between subgroupings and the total population.

To augment the data from official statistics, an interview survey, designed to collect information on the family formation patterns of various social subgroupings, was carried out in Wellington City in July 1967. Although the survey was geographically limited, it was expected that the findings could be generalized at least to New Zealand city populations on the assumption that behavioural differences amongst social sub-groupings were fairly uniform throughout society. In terms of the present study, the implication was, for example, that if Roman Catholic wives were found to have larger families than Protestants in Wellington, then this would also be the case in other New Zealand cities. That this is a valid assumption for the United States of America, is shown by the similarity of the differentials in family patterns between social subgroupings found by studies carried out in specific areas, and those using a national probability sample.[19] There is every reason to believe that the assumption is equally valid in a small country with a geographically mobile population like New Zealand. The survey was planned and organized by the present writer, and interviewers and their supervisors consisted of students and staff of the Department of Social

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[19] Examples are: (a) The Detroit Area Surveys. Several reports have been published, including [illegible] Goldberg, "Fertility of Two-Generation Urbanites," Population Studies 12, 3 (March 1959): 214-222. (b) The Princeton Study of a sample of women from seven Metropolitan Areas in the U.S. Principal reports: Charles F. Westoff et al., Family Growth in Metropolitan America, and C. F. Westoff, R. G. Potter, and P. Sagi, The Third Child (Princeton: Princeton University Press, 1961 and 1963). (c) The Growth of American Families--studies of a national probability sample of women. Principal reports: Ronald Freedman, Pascal K. Whelpton, and Arthur A. Campbell, Family Planning, Sterility and Population Growth (New York: McGraw-Hill, 1959); P. K. Whelpton, A. A. Campbell, and John E. Patterson, Fertility and Family Planning in the United States (Princeton: Princeton University Press, 1966).

Science, now the Department of Social Administration and Sociology, of the Victoria University of Wellington.

The survey sample was designed to include an adequate representation of families in each social sub-grouping expected to vary from the average in patterns of family formation, growth and dissolution. Occupational status and fertility level were chosen as bases for differentiating sub-groupings and, capitalizing on the tendency for people with similar social characteristics to form residential clusters, the census sub-divisions of Wellington City were ranked by occupational status and by child-women ratios. Each list of rankings was divided into thirds, representing areas of high, medium and low occupational status and fertility, respectively. Then, six subdivisions were selected to represent the possible combinations of status and fertility levels, as shown below.

Sub-divisions Chosen for Survey Interviewing according to Population Type. (The number of occupied dwellings in each, at the time of the 1966 Census is enclosed in brackets.)

High Fertility High Occupational Status	Medium Fertility Medium Occupational Status	High Fertility Low Occupational Status
Khandallah (1813)		Johnsonville (1320)
Low Fertility High Occupational Status	Miramar (2460)	Low Fertility Low Occupational Status
Wadestown (1101)		Brooklyn and Vogeltown (1812)

These combinations were chosen with the aim of including a complete range of family sizes and, within this, the complete range by occupational status. The method is a modified form of Social Area Analysis for the selection of a

stratified sample, as described by Wendell Bell.[20] The final step in sampling was to draw a random sample of one in five houses within each of the subdivisions chosen for inclusion in the study.

An interview was requested in each of the selected houses in which there was an eligible respondent. In line with the majority of similar surveys, wives only were interviewed. With sample size restricted to some thousand wives, requirements of statistical analysis made it necessary to restrict the variety of family types studied, and it had been decided to select the dominant type of New Zealand family--that where husband and wife were living together, with or without children. Maoris were excluded from the sample by definition of the study, so that eligibility for sample selection, then, was allotted to non-Maori wives of any age living with husband. In all, 942 usable schedules were obtained, the refusal rate amounting to 12.5 percent.

The interview schedule sought information on the occurrence and timing of the various steps in family formation and on present household composition. Data was also obtained on social and demographic characteristics which previous research has found to be associated with variations in family patterns or which could prove to be of relevance in New Zealand. A respondent was questioned about her present family and, more briefly, about her family of origin, the family in which she grew up. Consistent with a study of past trends, the questions were nearly all factual, requiring answers on past events and their timing and statuses already achieved. However, some opinions were sought to help in the evaluation of trends and the projection of future patterns of family formation. One such question which should be

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[20] Wendell Bell, "The Utility of the Shevky Typology for the Design of Urban Sub-Area Field Studies," reprinted in George A. Theodorson, ed., Studies in Human Ecology (Evanston: Row Peterson, 1961): 244-52.

discussed was that on birth expectations. The probable accuracy of a woman's predictions of the number of births she will have is a subject which has aroused some controversy since the question was introduced into major fertility surveys in the United States from the mid-1950's. It was used in the Growth of American Families study of 1955 to secure data on the additional children expected during the following five years, and answers were compared five years later with the fertility performance of similar couples during this period. The comparison showed that the 1955 data on expectations had low predictive value for individual behaviour, but that, for groups, the average expected was very close to the average number of children achieved.[21] Subsequent tests on other studies have produced similar findings.[22] These were felt to be sufficiently encouraging to justify the inclusion of a question on numbers of births expected in the Family Survey. Further, they gave some guidance on the use of the data, discouraging individual analysis but suggesting that some reliance could be placed on forecasts of average completed family size.

The classification of one of the social variables, namely occupation, requires a brief discussion. The categories used are given below, with an indication of the types of jobs allotted to each.

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[21] Whelpton, Campbell, and Patterson, Fertility and Family Planning, p. 374.

[22] See, for example, Charles F. Westoff, Elliot G. Mishler, and Lowell E. Kelly, "Preferences in Size of Family and Eventual Fertility Twenty Years After," American Journal of Sociology 42, 5 (March 1957): 491-97, and David Goldberg, Harvey Sharp, and Ronald Freedman, "The Stability and Reliability of Expected Family Size Data," Milbank Memorial Fund Quarterly 37, 4 (October 1959): 376.

Occupational Category	Types of Occupations Included
1. Professional and Managerial.	Professional occupations requiring a university degree or equivalent training; owners; managers of large businesses; senior public servants.
2. Minor Business and Professional	Professions such as primary school teaching or nursing, requiring less full-time training than occupations in Category 1. Owners and managers of small businesses with few employees. Senior technicians.
3. Clerical and Sales	Clerks; typists; insurance agents; wholesale and retail salesmen; factory foremen.
4. Skilled Manual	Manual occupations requiring considerable on or off-job training or combination of both. Includes occupations requiring an apprenticeship, e.g., plumbing.
5. Semi and Unskilled Manual.	Other manual occupations requiring much less training than those in Category 4 or virtually no training.

In classifying female occupations, clerical occupations requiring specialized training were coded Clerical A, others, Clerical B. Additionally, an undifferentiated category of Farming was used in classifying the occupation of respondent's father.

The occupational classification is a slight modification of those used in previous social surveys conducted by the Department of Social Science, Victoria University of Wellington.[23] Its main use in this study was as a scale measuring occupational prestige, a ranking basic to the differentiation

[23]For a description of the classification as used in one of these surveys, see M. Vandenberg, J. McCreary, and M. Chapman, A Social Survey of Hamilton (Wellington: Department of Social Science, Victoria University, 1965), pp. 5-6.

of social strata in New Zealand as in most modern societies.[24] Previous studies of family formation patterns have found differentials associated with membership of the various social strata with their particular attitudes, opportunities and interests, and the aim was to measure any such associations in the New Zealand data. However, the scale used is not a perfect status ranking. The first two categories and the last certainly measure descending status, but there is some doubt as to whether clerical and sales occupations should be ranked more highly than some skilled manual. The advantage of keeping these categories separate is that there is probably very little difference in the amount of prestige attached to each of these groups of occupations in New Zealand, but some differentials in family patterns may stem from the different demands of two distinct types of jobs, traditionally separated in classifications of white and blue-collar workers. The occupational classification used in this study, then, is based partly on job type and partly on occupational prestige.

Statistical analysis of survey data was carried out using cross-tabulations of variables and two types of multivariate techniques. Factor analysis was used to isolate any clusters of family formation variables, or combinations of these with social characteristics, which would immediately indicate sources of variation in family patterns. Analysis of variance regressed, a multi-regression technique designed to assess the relationship between a dependent variable classified on an interval scale and a number of independent variables whose classification need only be at the nominal level, was employed to discover how far a variety of social characteristics, separately and in combination, could account for variations in patterns of

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[24]Cora Vellekoop, "Social Strata in New Zealand," in John Forster, ed., Social Process in New Zealand (Auckland: Longman Paul, 1969), p. 263.

family formation, such as age at marriage, number of births and spacing between births.[25]

A final point to be explained is the basis on which trends in family patterns were calculated. As the study was designed to assess long-term changes in family structure rather than the fluctuations in marriage, fertility and mortality rates associated with variations in social conditions, trends were based on the performance of successive cohorts. Each birth cohort, or the people born in a specified group of years, was followed through to assess its average age at first marriage. Similarly, each marriage cohort, or those married in a specified group of years, was traced to assess its average family size, variations in family size, patterns of birth timing and spacing, and average life expectancy.

This introductory chapter has described the study, its setting and the data and methods used. Chapter Two begins the description and analysis of trends in family formation patterns.

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[25]The cross-tabulation programs, Cardex I and II, were designed, and run on an Elliot 503 computer, by Mr. K. Aldous, of the Applied Mathematics Division of the Department of Scientific and Industrial Research. The factor analysis and analysis of variance regressed programs were run by Mr. D. Kinneborough and Dr. J. Darwin, respectively, both of the Applied Mathematics Division.

CHAPTER II

MARRIAGE PATTERNS

Introduction

In societies where the main tasks of survival are carried out by family or kinship units, marriage patterns are closely related to traditional conceptions of family structure. They are shaped by the necessity to maintain the family as a strong, functional organization. By contrast, in societies where many of the vital functions, such as economic production, protection and education, are undertaken largely by specialized agencies outside the family, marriage patterns are more closely linked with socio-economic conditions. Where changes in these conditions influence changes in marriage patterns, the consequences for family structure and family life may be unanticipated and unintended.

New Zealand is, and has been since the first years of European settlement, a society of the second type. Her marriage patterns, emerging initially from a modification of the marriage norms of her British settlers in the light of the opportunities and constraints of colonial New Zealand, have changed with the changing age-sex structure of the population and with changing social and economic conditions. Together with changes in other aspects of family structure, the modified marriage patterns have laid a basis for changes in the roles of family members and in the place of the family in society. This chapter describes two aspects of marriage patterns which are strongly associated with family structure, age at marriage and the

proportion of the population who marry. Longitudinal trends are outlined and explained in terms of demographic and socio-economic changes in society.

Trends in Average Age at First Marriage and Proportions Marrying

Average age at first marriage[1] and proportions marrying were calculated for five-year birth cohorts, 1866-71 to 1941-46, from census tabulations of marital status by age group, commencing with the 1866 Census.. Techniques used closely follow those described by Hajnal.[2] His decision to compare the marriage performance of successive birth cohorts according to the percentages who had married by age fifty was also followed, in view of the insignificant number of first marriages found to have taken place at older ages. Calculations of proportions single in each five-year age group were arranged by birth cohort and an index, average age at first marriage, was derived from the tables. Table 2.1, below, shows the trend in marriage age from the late nineteenth century.

(See Table 2.1, page 32a)

Table 2.1 shows a rise in the average age at marriage of both males and females amongst the birth cohorts that reached marriageable ages around the turn of the twentieth century. It is probable that marriage age was younger in the initial period of New Zealand settlement and that it had begun to rise during the last two decades of the nineteenth century, the

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[1]As the aim was to discover proportions of people who had married, rather than numbers or proportions of marriages, statistics relating to first marriages are used throughout. Subsequent references to marriage age should be read as "average age at first marriage."

[2]John Hajnal, "Age at Marriage and Proportions Marrying," Population Studies 7 (1953-54): 111-36.

TABLE 2.1

MEAN AGES AT FIRST MARRIAGE OF PERSONS MARRYING BY AGE 50 YEARS, BY BIRTH COHORTS 1866-71 TO 1941-46

Birth Cohorts Circa April to April	Years	
	Male	Female
1866-71	29.7	25.6
1871-76	30.0	26.4
1876-81	29.9	26.3
1881-86	29.8	25.8
1886-91	28.9	25.6
1891-96	28.7	25.3
1896-01	28.3	25.2
1901-06	28.4	25.5
1906-11	28.3	25.5
1911-16	27.7	25.2
1916-21[a]	27.1	24.4
1921-26	26.6	24.0
1926-31	26.2	23.1
1931-36	25.7	22.6
1936-41	25.3	22.4
1941-46	24.9	22.2

SOURCE: Census Reports, Ages & Marital Status.

[a]Mean ages for the 1916-21 and younger cohorts are based partly on census derived figures and partly on proportions projected by extension of recent trends.

Calculations of average age at marriage according to method described in John Hajnal, "Age at Marriage and Proportions Marrying," Population Studies 7 (1953-54): 111-36.

two earliest birth cohorts in this table showing the end of this trend. A tendency towards a decrease in marriage age followed and this was interrupted by a slight increase for cohorts reaching marriageable ages during the economic depression in the late 1920s and early 1930s. A rapid decline in marriage age commenced with the cohorts reaching marriageable ages near the beginning of World War II, and appears to have continued.

Table 2.2 shows the proportion of successive birth cohorts who had married by age groups 20-24 and 50-54 years. The percentages in columns for age group 20-24 show the nature of the trend to a younger marriage age; those for age group 50-54 show the changes in proportions marrying.

(See Table 2.2, page 33a)

A comparison of the columns for age groups 20-24 and 50-54 years indicates that while marriage rates at young ages and overall marriage rates have both increased over the century, the increases have been sharper at the younger ages.

Male marriage rates by age group 20-24 were about four times as high in the 1941-46 birth cohort as those of the 1866-71 cohort. In comparison, female rates have just doubled for the later cohort. An examination of the percentages for cohorts after 1866-71 shows that there was a reduction in the proportion of early marriages after that time. This trend to an older marriage age was slight and short-lived for males, but more marked and of longer duration for females. While the male rates by age group 20-24 showed a fairly rapid recovery, the female rates did not begin a sustained increase until those of the 1916-21 birth cohort. This comparison details the trend to an older marriage age at the turn of the twentieth century. Table 2.2 also indicates that the most striking increases in marriage rates at early

ages, for both males and females, have taken place recently, in fact over the past thirty years. In this period, too, the increases have been more marked for men than for women.

Proportions marrying, as shown in the columns for age group 50-54, have increased, and again the increases began earlier for men than for women. The earlier male increases document the transition from a colonial marriage pattern where a surplus of men, including a high proportion of migrants and transients, resulted in comparatively low male marriage rates. The size and similarity of the male-female percentages by the 1941-46 birth cohort emphasize the significant actual and projected increases in the proportions of both sexes marrying over some fifty years. The male percentages by age group 50-54 years indicate a continuous rise in marriage rates so that, although there was a relative delaying of marriage in the early twentieth century and around the time of the depression in the 1930s, this did not lead to a decline in the proportions eventually marrying. It is quite possible, however, that depression conditions in the later period delayed the substantial increase in proportions marrying which was to follow their disappearance. The female proportions by the same age group 50-54, taken in conjunction with the average marriage ages for cohorts 1901-06 and 1906-11, show even more clearly than the male that the main effect of the depression on marriage patterns was a delaying of marriage, rather than a complete postponement.

In summary, then, there was an overall trend to a younger marriage age, beginning rather tentatively with birth cohorts reaching ages of marriage around the end of the first decade of this century and accelerating markedly since the beginning of World War II. There was also a fairly consistent increase in the proportions of men marrying, starting with the birth

TABLE 2.2

PERCENTAGES OF SUCCESSIVE BIRTH COHORTS MARRIED BY AGE GROUPS 20-24 AND 50-54 YEARS. SEX RATIO (NUMBER OF FEMALES PER 1000 MALES) IN CENSUS YEAR, COHORTS AGED 20-24 YEARS.

Birth Cohorts Circa April to April	Age Groups				Cohorts Aged 20-24 in Census Year	Sex Ratio in Census Year
	Male		Female			
	20-24	50-54	20-24	50-54		
1866-71	8.3	82.6	30.1	86.0	1891	882
1871-76	7.0	86.4	24.6	85.8	1896	894
1876-81	7.5	85.7	24.2	86.3	1901	903
1881-86	7.9	86.9	27.1	86.7	1906	887
1886-91	8.0	87.1	28.1	87.1	1911	396
1891-96	10.0	88.7	29.8	87.9	1916	921[b]
1896-01	12.8	89.4	31.1	87.9	1921	956
1901-06	12.1	90.5	29.8	88.7	1926	957
1906-11	11.7	91.4 [a]	30.8	90.2 [a]	1931	[c]
1911-16	10.2	91.5	28.2	92.2	1936	972
1916-21	15.4	92.0	39.0	93.7	1941	[c]
1921-26	16.3	92.1	37.1	94.7	1946	995[b]
1926-31	20.6	93.0	49.9	95.8	1951	994
1931-36	23.1	94.1	56.6	96.5	1956	988
1936-41	26.0	94.6	59.1	96.7	1961	990
1941-46	30.5	95.2	60.6	96.6	1966	992

SOURCE: Census Reports, Age & Marital Status.

[a]Percentages below lines based partly on census derived figures and partly on proportions projected by extension of recent trends.

[b]Includes armed forces overseas. Sex ratio at Census, September 1945, substituted for 1946.

[c]No census this year.

cohort of 1866-71, and a comparatively recent increase in the proportions of women marrying.

Demographic Influences

In analyzing the reasons for changes in marriage patterns, it is tempting to confine the search for explanation to changing social values related to marriage and the family, and to the changing socio-economic conditions which facilitate marriage or make it more difficult. While these are certainly strong influences on marriage patterns, there is another source of explanation which should not be neglected, the changing age-sex structure of the population. In a monogamous society, high marriage rates are facilitated by an even distribution of the sexes, especially at the popular ages for marriage. Where a social norm prescribes that women should marry men a little older than themselves, as is the case in New Zealand, a marked imbalance between the number of women reaching marriageable ages and the men two or three years older can have several possible consequences for marriage patterns. Amongst these are the possibilities that a smaller proportion of the more numerous sex will marry, that some of their marriages will be postponed, thus raising the average marriage age, or that they will tend to marry partners outside the "normal" range of age difference between husband and wife. An examination of the changing age-sex structure of the population, bearing in mind these potential responses to the imbalance of the sexes, provides some explanation of the New Zealand marriage trends, specifically the changing sex differential in proportions marrying and the greater increase in marriage rates at young ages for men than for women.

Larger proportions of women than men had married in the earlier birth cohorts, represented in Table 2.2. This illustrates the last stages of the marriage patterns typical of the colonial period. In its earlier

years, New Zealand had a relatively high proportion of males, a result of the heavily male-dominated immigration to a new country.[3] The greater number of men provided absolute limits to the proportion who could marry. Further, because New Zealand had most of the characteristics of a pioneer society, marriage was an improbability for certain categories of men. For example, there were those in occupations isolated from towns by distance and poor transportation and often living in primitive conditions. Then again, there were groups of men, frequently transients, attracted by gold discoveries or other potential opportunities to gain wealth. In short, the relatively low proportion of men who married in the nineteenth century reflected both their numerical dominance in the population, generally, and the high concentration of men in occupations where marriage was regarded as unsuitable or in localities which made it almost impossible. By the twentieth century the proportions of men and women marrying had begun to equalize. Then there was a swing to a higher proportion of men marrying in the cohorts whose patterns were influenced by the effects of the first World War and later depression, followed by a marked recovery of the differential in favor of women and lastly a projected lessening of the sex differential in proportions marrying.

Contrasts were found between the histories of the cohorts at the popular marriage ages from the beginning of World War I to the end of the depression period in the 1930s (cohorts 1891-96 to 1911-16), and those of the cohorts at the same ages during and after World War II (cohorts 1916-21 to 1931-36). The marriage patterns of some of the first group of cohorts, 1891-96 to 1906-11, clearly demonstrated the effect of the loss of men in

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[3]Sex ratios from 1891 are shown in Table 2.2. The proportion of males was even greater earlier in the century. The greatest imbalance was shown in the 1861 Census when 620 females were enumerated for every 1000 males.

the 1914-18 war. The relative increase in male marriage rates in these cohorts resulted in a higher proportion of males than females marrying, almost certainly for the first time in the history of Europeans in New Zealand. An effect of the economic depression appears to have been a delaying of male rather than female marriages at the younger ages, a reflection of a time when husbands were typically the sole financial providers in a family. This was followed by a more than usually rapid decline in the sex differential in the marriage rates of these cohorts, 1906-11 and 1911-16, an effect of the relatively small proportion of men at that time. The marriage pattern during and after World War II was markedly different. The particularly high percentage of men in birth cohort 1921-26, married by age group 20-24, suggests an acceleration of young male marriages, attributable in part to the numbers of men who married before departing on military service, a tendency not apparent in the figures for the period around World War I.[4] The other percentages for this group of cohorts, 1916-21 to 1931-36, show relatively high female marriage rates as compared to those after World War I. The higher rates were facilitated by an excess instead of a shortage of men at popular marriage ages. The major reason for this excess was a continuous decline in birth rates through the 1920s to the mid-1930s. This trend meant that there was a larger number of men eligible for marriage than females two or three years younger for several years during and after World War II.

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[4]Rev. Angus Ross confirmed this tendency for an Auckland Presbyterian parish: "During the period of the first World War, 2 out of 10 men married at 25 or younger. During the first World War, many marriages were postponed while men went overseas; in the second World War, marriages were brought forward so that men married before leaving the country. The second World War marks the start of a trend towards earlier marriages for grooms . . .," A. A. Ross, "Some Reflections on an Examination of the Marriage Registers of St. John's Presbyterian Church, Papatoetoe, for the Period 1855-1961." (Manuscript)

In the most recent period, the actual and projected sex differential in marriage rates and a reversal of the trend to higher female rates were, in turn, influenced by the rise in birth rates after 1935, leading to relatively high proportions of women at the popular marriage ages. The effects of this excess of women on recent marriage patterns bears further examination. Table 2.3 gives ratios of single men, 20-29, to single women, 16-24 years, and a comparison with the ratio in each cohort five years later, from the time of the 1951 Census. The last column in the table gives the ratio of the number of births in the male cohort to that in the female.

(See Table 2.3, page 38a)

Comparing the birth period ratios with those measuring the number of single males to females at the popular marriage ages, it is apparent that they varied together, showing the continuing influence of birth rate trends. The birth cohort ratios, however, were modified to varying degrees according to the migration, mortality and marriage patterns over the respective twenty to thirty-year periods.

A positive correlation is also shown between the relative numbers of males and females at popular marriage ages and the ratios in the same cohorts five years later. About half the variance in the ratios of single males, 25-34, to single females, 21-29 years, is explained by differences in the earlier ratios. A relative increase in the proportion of males married over a five-year period, as the masculinity of the earlier ratio declined, is quite apparent. This indicates that the fall in the supply of single men at the popular marriage ages partly explains the recent relative increase in male marriage rates. The increase would have been greater, however, had not the relative shortage of single men been accompanied by a greater propensity

TABLE 2.3

RATIO OF SINGLE MALES TO SINGLE FEMALES AT POPULAR AGES OF MARRIAGE, AT SELECTED CENSUS DATES AND THE RATIO IN THE SAME COHORTS, FIVE YEARS LATER. RATIO OF NUMBERS OF BIRTHS IN BIRTH PERIOD OF MALE TO THAT OF FEMALE COHORT.

	(a)			(b)
Year of Enumeration	Single Males 20-29 to Single Females 16-24	Single Males 25-34 to Single Females 21-29	Year of Enumeration	Birth Period Ratio
1951	1.04	1.42	1956	1.19
1956	0.99	1.27	1961	1.05
1961	0.83	1.02	1966	0.92
1966	0.73	--	1971	0.88
1971	--	--	1976	0.93
1976	--	--	1981	1.00
1981	--	--	1986	1.03

SOURCES: (a) Census Reports, Ages & Marital Status.
(b) Reports on the Vital Statistics of New Zealand.

for women to marry men closer to their own ages. This may be illustrated by showing the percentages of women who married outside the range of the popular ages of marriage, as defined in this study, for each of the five-year periods from 1951-65. The calculation was based on the number of first marriages in which women aged 16-24 in the census year married men younger than 20 or over 29 years, those where women 17-25 in the following year married men outside the 21-30 age range, and so on to those where women 20-28 married men outside the 24-33 age group in the calendar year before the next census was taken. The following pattern emerged.

(See Table 2.4, page 39a)

The decreasing ratio of single males, 20-29, to single females, 16-24 years, from 1951 had accelerated a trend towards the closure of the age gap between husband and wife and this trend was still continuing when the present study was completed in 1970.

As suggested in the last paragraph, the trend towards a decrease in the age gap between husband and wife was not a new one. Indeed it is likely that it had been relatively continuous from the later colonial years when the disproportion between numbers of men and women was diminishing, resulting in a high proportion of marriages where the wife was much younger than her husband. As male marriage rates increased, the proportion of older single men was reduced and the relative number of marriages of this type declined. Statistics to substantiate this probability are available from the beginning of World War I. In 1916, for example, 52 percent of the brides, 16-19 years, married men six or more years older, by 1946 the percentage was reduced to 41 and by 1966, to 19. The trend was not quite as dramatic for brides aged 20-24 years, but it still showed a significant reduction in marriages between

women and much older men. The percentage of those brides who married men six or more years older was 35 in 1916, 25 in 1946, and 15 in 1966. These figures suggest the shape of the long-term trend to a contraction of the age gap between husband and wife. It was continuous from at least 1916, but showed a marked acceleration after World War II. As has already been suggested, a demographic explanation of the acceleration is found in the exceptionally low ratio of single males to females at the popular marriage ages from the later 1950s. Under these conditions a larger percentage of brides have married grooms much younger than previously usual in New Zealand. These marriages could not have taken place, however, without adequate social and economic support. The changing nature of this support is discussed in the next section.

Social and Economic Influences

This section focuses mainly on exploring social and economic influences on age at marriage and proportions marrying in the period since World War II. Two earlier changes are briefly commented on, however, the rise in marriage age towards the end of the nineteenth century and at the time of the economic depression in the 1930s.

Demographic explanations of the rise in marriage age in the later years of the nineteenth century have already been advanced. The changing age-sex composition of the population led both to a lowered availability of marriage for women, one of the effects of which was to increase their average marriage age, and to an increased availability of marriage for men, resulting, in part, in a higher marriage rate for older men so that male marriage age also increased. This higher rate was facilitated by the emergence of a more settled society and by the improvements in the transport of goods and people, which were reducing the isolation and austerity of many rural areas. It is,

TABLE 2.4

PERCENTAGE OF WOMEN MARRYING MEN OUTSIDE THE "NORMAL" AGE RANGE FOR SELECTED FIVE YEAR PERIODS

Age of Men	Percentage of Women		
	1951-55	1956-60	1960-65
Younger than the Age Range Limit	16.3	19.6	23.3
Older than the Age Range Limit	6.8	6.6	6.1
Total outside Age Range	23.1	26.2	29.4

however, probable that the main influence was a socio-economic one, that the unfavorable economic conditions of the 1880s triggered off the trend to an older marriage age[5] and that the later age became "normal" for several subsequent decades, reflecting the adjustment of a people with aspirations for good standards of living in the light of the limitations of the New Zealand economy.

The temporary rise in the marriage ages of birth cohorts reaching popular marriage ages during the depression in the 1930s can be attributed, more confidently than can the late nineteenth century increase, to economic effects. In comparison with the performance of previous cohorts, there was a tendency to marry later rather than refrain from it altogether, as shown by the fact that a greater proportion in these birth cohorts married eventually than in any earlier birth cohort included in this study. In this period, husbands were still the sole economic providers for the great majority of families. Some families, of course, had additional income, including those where wives were in employment. The latter, however, was uncommon for several reasons, including a lack of social acceptance of the employment of married women, particularly among white-collar groups, and a pronounced scarcity of

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[5]Many research studies have demonstrated that a major economic depression can result in a temporary decrease in marriage rates, particularly at the younger ages. Examples of such studies related to the 1930s' depression are: D. Kirk, "The Influence of Business Cycles on Marriage and Birth Rates," in National Bureau of Economic Research, Demographic and Economic Change in Developed Countries (Princeton: Princeton University Press, 1960); K. G. Basavarajappa, "The Influence of Fluctuations in Economic Conditions on Fertility and Marriage Rates, Australia, 1920-21 to 1937-38 and 1946-47 to 1966-67," Population Studies 25 (March 1971): 39-53. The effects of the widespread depression in the late 1870s and early 1880s on marriage rates has not been as extensively investigated. One study suggests that the demographic response to this depression in Britain was a fall in fertility rather than marriage rates: J. A. Banks, Prosperity and Parenthood (London: Routledge and Kegan Paul, 1954), pp. 12-13 and 167-8. However, a reduction in marriage rates is an equally probable response.

jobs for women.[6] Under these conditions it would have been financially impossible for some men to marry at various points in this period. Probably the high rate of unemployment, rising to well above 10 percent of the males of work-force age on occasions during the 1929-35 period, the decrease in average wages and widespread feelings of economic insecurity, all had some influence towards delaying marriages.[7]

An examination of the reasons for the sharp decline in age at marriage and increase in proportions marrying since the beginning of World War II will follow ideas derived from a study of European marriage patterns by John Hajnal[8] and from a theory of the determinants of age at marriage advanced by Kingsley Davis and Judith Blake.[9] Both are studies of marriage patterns in ideal types of society rather than in changing societies. However, they suggest by implication the socio-economic changes likely to influence marriage patterns.

Hajnal demonstrated that a distinctive marriage pattern had existed amongst Western Europeans for at least two centuries before 1940. In comparison with the pattern in all other societies it was distinguished by a high age at marriage and a high proportion of people who never married. Although the focus of the study was on a classification of marriage type, some social indicators of each type of marriage were suggested. For instance, the

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[6] 3.5 percent of married women were in paid employment in 1926. The proportion was practically unchanged in 1936, 3.7 percent.

[7] "Employment and Unemployment," New Zealand Official Year Book (Wellington: Government Printer, 1935), pp. 612-19; New Zealand Prices, Wages and Labour Statistics (Wellington: Government Printer, 1966), p. 38.

[8] J. Hajnal, "European Marriage Patterns in Perspective," in D. V. Glass and D. E. C. Eversley, Population in History (London: Edward Arnold, 1965), pp. 101-43.

[9] K. Davis and J. Blake, "Theory of Determinants of Age at Marriage," abstract, Population Index 28 (1962): 228-9. This paper does not appear to have been published in full.

"European" pattern was associated with a nuclear family structure which meant that a man had to make independent economic provisions for the family before he could marry. The "non-European" pattern, on the other hand, was associated with societies where larger economic units such as joint families were the norm. In societies with this sort of family structure, a husband was not usually the sole provider. Hajnal claimed that since 1940 the unique "European" marriage pattern had shown signs of disappearing. In much of Europe people have married earlier and much higher proportions have married, a similar trend to that in New Zealand. This suggests that some conditions in European countries may have become more like those associated with a "non-European" pattern, for instance, that a husband has some assistance with economic provision for the family, a hypothesis to be examined below.

From the Davis-Blake theory it can be derived that a decreasing marriage age should be associated with any or all of the following: a lessening of the social and economic constraints on marriage, an improvement in birth control within marriage and a lack of a liberalization of attitudes to extra-marital sexual intercourse, such as would encourage some to postpone marriage. The recent socio-economic history of New Zealand will be examined to discover whether the declining marriage age has been associated with changes along these lines.

The decline in average marriage age has taken place during a period of relatively good economic conditions and one in which certain economic constraints on marriage have lessened. From the beginning of World War II until 1966, the most recent date for which marriage statistics are given, there was virtually full employment, social security provisions prevented excessive hardship in any sector of the population and the effective average

per capita income of both males and females showed a slight increase.[10] The single most important economic influence, however, has been the increase in the proportion of married women in employment and this is discussed in more detail.

Since World War II, there have been substantial increases in the proportion of married women in employment in all age groups. Considering married women of all ages, 8 percent were in employment at the time of the 1945 Census, 20 percent by that of the 1966.[11] The increase has resulted, firstly, from an increase in the employment opportunities for all women which has raised their participation in employment. In 1951, women constituted 23.5 percent of the total labor force, by 1966, 27.1 percent. Secondly, the increases derived from a set of conditions which has meant that increase in female economic activity had to involve the employment of a much higher proportion of married women.

Undoubtedly the most powerful influence on the demand for female labor has been the expansion in secondary and tertiary industry in the cities. Many of the jobs in the industries have been traditionally allocated to women, while new occupations, felt to be suitable for them, have emerged through new activities, processes and mechanization. The relative concentration of female employment in the cities can be illustrated by census figures for 1961, when it appeared that a fifth of the total female population in the Urban Areas were in employment, as compared with an eighth in the rest of New Zealand.[12]

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[10] New Zealand Prices, Wages and Labour Statistics, 1966, p. 38.

[11] A more detailed statistical analysis of the increase in the employment of married women can be found in M. Gilson, "Women in Employment," in Social Process in New Zealand, ed. John Forster (Auckland: Longman Paul, 1969), pp. 183-97.

[12] An Urban Area is a census term and is defined as "a central city or large borough together with adjacent areas regarded as suburban to it. It is a non-administrative unit . . ."

Likewise, a fifth of the married women in Urban Areas were employed, in comparison with a tenth in other areas. More work is available for women in Urban Areas and these have been the main destinations of recent internal and overseas migrants, the population of the eighteen Urban Areas increasing from 57.4 percent of the New Zealand population in 1951 to 62.5 in 1966. In short, female employment opportunities have increased most in the larger urban places and a greater percentage of the population is living where female employment is more freely available.

A second reason for the increased demand for female labor stemmed from the relatively low proportion of the population in the work force after World War II due to the small birth cohorts of the 1920s to the mid-1930s. In a period of economic expansion, this has encouraged employers to engage women for jobs previously undertaken by men, and it has also increased the competition to staff the traditionally female occupations.

As the demand for women workers increased, the proportion of the women of labor force age who were single was declining, due to the trend to a younger marriage age and an increase in the proportions marrying. This led to a demand for the services of married women. The employment of married women had not been a common practice in New Zealand. In 1926 and 1936, only 8 to 9 percent of women workers were married, but the combination of influences described raised the proportion to 41.5 in 1966. The steepest increases in the economic participation of wives occurred in two periods in the family life cycle, directly after marriage before the birth of children and later, when child care responsibilities were diminishing. Employment in the second period had become more feasible through changes in the family life cycle resulting in the completion of child-bearing when a woman was still comparatively young. For example, a woman marrying in the early 1950s had

her last child by the time she was thirty-two, on the average, whereas a woman marrying in the first decade of the twentieth century was almost forty years, on average, at the same stage of family life. This change resulted from a younger marriage age, a smaller number of births and a contraction of the intervals between births. It is apparent that the more recent timing of the family cycle means that a woman is still of an age to consider it possible and worthwhile to return to work when her children no longer need her full-time care. However, it is the increases in the proportion of wives working at ages 16-29 that are the most relevant for a study of changing marriage age. The fact that more women were continuing to work after marriage suggests that a growing proportion of marriages were consciously being established on the basis of two incomes, facilitating earlier marriage. The increased availability of jobs for older women could have had an influence on marriage age, however, by leading to the expectation that additional family income could be obtained through a wife's employment, if and when required.

The relationship between age at marriage and employment was explored for an urban population as represented in the Family Survey. First, the women who had married during each five-year period from 1927-32 to 1962-67 were classified according to whether or not they had continued in employment on marriage. Table 2.5, below, shows a complete reversal of the majority pattern over this period.

(See Table 2.5, page 46a)

The trend shown in Table 2.5 makes it quite apparent that the continuance of employment after marriage has become the common practice for women living in cities.

To test the hypothesis that this practice has been associated with a

TABLE 2.5

PERCENTAGE OF WOMEN EMPLOYED AND NOT EMPLOYED IMMEDIATELY AFTER MARRIAGE, BY MARRIAGE COHORTS, 1927-32 TO 1962-67

Marriage Cohort	Percentage		Number of Cases
	Employed	Not Employed	
1927-32	17.3	82.7	52
1932-37	20.0	80.0	60
1937-42	33.8	66.2	127
1942-47	47.0	53.0	117
1947-52	51.0	49.0	139
1952-57	69.3	30.7	140
1957-62	72.0	28.0	100
1962-67	78.8	21.2	141

SOURCE: Family Survey.

younger marriage age, a variable classifying the amount and timing of employment since marriage was included in a multivariate analysis of female age at marriage. It was discovered that those who had been employed before their first child was born had married at a significantly younger age than those who had not been employed since marriage, $t = 2.9$. A multivariate analysis of numbers of years worked since marriage showed that the younger a woman had married, the longer she had been employed since marriage. Duration of marriage was held constant. Differences between means reaching at least the 5 percent level of significance were: those who had married at ages under 20 had worked longer than those who had married at 25-29 years, $t = 2.6$, and those who had married at 30+ years, $t = 2.8$. It has been shown that there has been a steep increase in the proportion of women continuing to work after marriage and also that employment after marriage has been positively associated with a younger marriage age. The investigation has strongly suggested that the increasing practice of establishing a marriage financially on the basis of husband and wife incomes has contributed to the decrease in marriage age and supports the hypothesis, derived from the Hajnal study, that marriage will be younger when the husband is not solely responsible for the economic support of the household.

A weakening of some of the social constraints on early marriage has been associated with the economic changes. An increased social acceptance of joint financial responsibility in the early stages of marriage has accompanied the increase in the proportion of wives working. This has led to a change in the norms prescribing what possessions should be acquired before marriage. It has become more acceptable to marry with a few possessions and to buy household equipment and larger items on a joint husband-wife basis.

Once a trend to a younger marriage age has begun, it is socially

reinforced. A younger marriage age becomes the norm. In a society where marriage is still regarded as the acceptable living pattern by most sections of the population, the operation of the age norm can be seen quite clearly in the behavior of friendship and other primary peer groups. Once some members have married, there is pressure on others to follow for a variety of reasons, including a desire not to be considered "abnormal," a fear that older marriage is improbable and a loss of customary companionship. In other words, while a lessening of some social constraints may merely permit younger marriage, another sort of social constraint may operate towards enforcing it.

The third factor expected to be related to a decreasing marriage age was an improvement in birth control within marriage. This is obviously linked to the confidence with which a couple can plan to marry on the basis of two incomes. Knowledge, acceptability and efficiency of contraceptive techniques appear to have increased in New Zealand since World War II, as will be described in Chapter 4, and this is likely to have been an influence on the decline in marriage age.

The last variable to be investigated in terms of the Davis-Blake theory on the determinants of age at marriage was attitudes to sexual intercourse outside average marriage age, other factors being held constant. An indirect test of this proposition was made. Ex-nuptial birth rates had increased since World War II, and particularly sharply in the 1960s, with the greatest increases occurring among women at ages under 25 years.[13] It was reasoned that if this increase had occurred without a comparable increase in the proportion of brides pregnant at marriage, this could indicate a

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[13] Interdepartmental Report on Ex-Nuptial Births, Wellington, mimeographed, 1969, Appendix 2 and p. 4.

change in social attitudes to births outside marriage.[14] Such a change could have a considerable effect on marriage age in New Zealand where the proportion of ex-marital pregnancies resulting in births has recently been exceptionally high for an economically developed country.[15] Further, regardless of social attitudes, any substantial changes in the proportion of brides pregnant at marriage were likely to have influenced past trends. The particular change which could have accelerated the trend to a younger female, and possibly male, marriage age was an increase in the proportion of pregnant brides at young marriage ages, on the assumption that pregnancy tends to hasten the marriages of those with pre-marital conceptions, so that birth can take place within marriage.

Calculations of the proportion of women pregnant at marriage are given in Table 2.6, below. The figures for those who married between 1962 and 1967 are given by age group at marriage and are based on statistics for the total population. It was impossible to exclude Maoris here, as the relevant tabulations of births and marriages were given for the total population in this period and there was no good basis on which a separation could be made. The calculation could not be carried out for marriage cohorts 1953-61, as the populations in the relevant tables did not match in that period, but a previous study for the non-Maori population supplied a comparison of the proportions of pregnant brides, 16-49 years, in marriage cohorts

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[14] It is not known how far social attitudes to extra-marital sex relations are correlated with attitudes to births outside marriage in New Zealand, so that the following calculations can be regarded as only an incomplete test of the Davis-Blake hypothesis.

[15] The total number of extra-marital conceptions resulting in confinements within or outside marriage, as a percentage of total confinements, was estimated to be 22.5 percent in 1967.

1947-52.[16]

(See Table 2.6, page 50a)

Comparing the percentages of pregnant brides married at ages 16-49, in the earlier and later period, it appears that there was a substantial increase somewhere between marriage cohorts 1952 and 1962. This is so, even if a maximum allowance is made for the effects of the inclusion of Maoris in the later period. It is highly probable that part of the increase took place amongst those marrying at young ages and so the increasing proportion of pregnant brides may well have influenced the trend to a younger marriage age.

Over the period 1962-67, however, the proportion of pregnant brides was reasonably stable in every age group at marriage. There were no increases in the 16-19 and 20-24 groups to suggest that the variable had an influence on the ongoing trend to a younger marriage age. The discrepancy between the rapid increase in ex-nuptial birth rates and the stability of the proportion of pregnant brides suggests that attitudes towards having births outside marriage may have been changing in recent years, which would have implications for average marriage age in the future. While this is a probable change in social attitudes, it cannot be regarded as having been completely demonstrated, as the changing distribution of extra-maritally conceived births within and outside marriage could have resulted partly from other factors, such as an increase in the proportion of extra-marital conceptions where marriage was impossible for the couples involved.

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[16] E. G. Jacoby, "Some Demographic Observations on First Order Births in the Light of the Cohort Approach," The Economic Record (September 1961): 308-19.

TABLE 2.6

BRIDES WHOSE PRE-MARITAL CONCEPTION RESULTED IN A LIVE BIRTH WITHIN EIGHT MONTHS OF MARRIAGE AS A PERCENTAGE OF ALL BRIDES IN THE SAME AGE GROUP AT MARRIAGE, 1947-52 AND 1962-67.

A. Non-Maori Population

Year	Age Group at Marriage 16-49	Year	Age Group at Marriage 16-49
1947	13.2	1950	13.4
1948	13.6	1951	13.4
1949	13.1	1952	13.7

SOURCE: E. G. Jacoby, "Some Demographic Observations on First Order Births in the Light of the Cohort Approach," The Economic Record, September 1961, p. 315.

B. Total Population

	Age Group at Marriage					
Year	16-19	20-24	25-29	30-34	35-39	16-49
1962	49.7	19.3	13.4	11.3	4.4	25.3
1963	49.9	19.3	14.8	12.0	4.6	26.1
1964	49.7	19.1	14.3	11.1	4.8	26.2
1965	49.8	18.7	14.9	10.7	4.5	26.8
1966	48.0	18.4	13.5	11.0	4.2	26.5
1967	47.9	18.3	13.4	11.1	3.8	26.3

NOTES on B:

Calculations were based on: (1) Tabulations of Nuptial First Births by Age of Mother and Duration of Marriage in months; (2) tabulations of numbers of marriages at each year of age for each year represented in the period. Both tabulations from Reports on the Vital Statistics of New Zealand. The method was described by K. G. Basavarajappa, "Pre-Marital Pregnancies and Ex-Nuptial Births in Australia," Australian and New Zealand Journal of Sociology 4, No. 2. (1968): 126-45.

An additional variable, whose influence on marriage age should be considered in its New Zealand context, is that of housing. European New Zealanders adhere strongly to the practice of establishing their own household at time of marriage, a practice reinforced by social attitudes relating to the difficulties likely to be faced by two-family households. In the Family Survey there were only two instances of married children living with parents amongst 942 respondents, and these were the only examples of "doubling-up" at time of marriage. In view of these attitudes and practices, a housing shortage or inability to finance a house could lead to marriage delay, possibly increasing marriage age, or at least preventing it from becoming younger.

There was a severe housing shortage after World War II, which would have been even more extreme had not an extensive program of housing construction by the State been put into operation in the late 1930s. The inadequate amount of existent housing, the pressures arising from accelerating marriage rates and the relatively high level of immigration made housing a problem for many proposing to marry. Although extensive State and private construction continued through the 1950s, it was not until the early 1960s that the problem was on the way to being overcome. By the mid-1960s, the problems were confined mainly to the financing of a house and obtaining one in a desired area.

It is possible that the inability of some to obtain housing prevented a more rapid decline in the average age at marriage than actually occurred, particularly in the 1950s. However, this would need to be investigated in greater detail before it could be more definitely stated. Arguments against it would include the fact that many expedients were used to make housing available, for instance, the sub-division of larger houses into apartments and the use of holiday cottages as permanent residences.

In summary, of the social influences on the trend to a younger marriage age since World War II, it appears that the socio-economic change with the greatest influence was a considerable increase in the practice of establishing a marriage on the basis of husband-wife incomes. This was facilitated by an increase in the availability of employment for married women, changes in some social attitudes and an improvement in contraception within marriage. A generally expanding economy influenced the availability of male as well as female employment and ensured incomes which would provide an acceptable standard of living. An increase in births resulting from conceptions outside marriage appeared to have influenced the trend to a younger marriage age in the earlier, but not the later, part of the period. The shortage of housing may have inhibited a more rapid decline in marriage age during the 1950s, but the lessening of the problem in the 1960s removed this inhibiting influence.

Many of the same changes are likely to influence an increase in the proportion of the population marrying from the birth cohort of 1921-26 to that of 1941-46, except in the event of catastrophic changes in economic or other conditions.

Although the proportions marrying appear to be approaching those in Hajnal's "non-European" pattern, it is most unlikely that age at marriage in New Zealand will fall to the average common in "non-European" societies. The demand for increasing proportions of people with advanced education and training in an economically advancing society would, alone, supply a set of conditions to prevent this happening. At present, those undertaking occupations requiring a relatively long period of education tend to marry later

than others.[17] It is probable that the differential will continue, although it may contract slightly if the emerging tendency to marry before education is completed becomes common practice. This possibility is largely dependent on the existence of arrangements for adequate financial support during the "student" period.

The average age at marriage of all occupational groups would have to decline markedly for further substantial decreases to occur, a condition unlikely to be fulfilled in an economically advancing country where the changing occupational structure and the professionalization of many occupations are demanding higher educational qualifications. Since World War II, however, there have been sharp declines in marriage age and increases in the proportion of the population marrying in New Zealand, as in most economically developed countries. There has also been a marked contraction of the age gap between husband and wife. The contribution of these changes to a change in the family life cycle and its social implications are discussed in Chapter 8.

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[17] An analysis of Family Survey data for women married between 1952 and 1957 showed that both males and females in occupations requiring more education or training married later than those in manual occupations. t tests on differences in mean age at marriage:
Females: Professional and Managerial -- Manual, t = 2.1
Males: Minor Business and Professional -- Manual, t = 3.2

CHAPTER III

FAMILY SIZE: NEW ZEALAND TRENDS

Introduction

The most marked change in New Zealand family patterns over the period covered in this study has been a reduction of the average number of children in a family from rather more than six to between two and three. This has greatly altered the timing of the family life cycle, halving the length of the child-bearing period, shortening the child-rearing stage, and usually advancing the time that all children will have left home, so that a husband and wife will spend more of their married life alone together. Family roles and relationships are potentially affected by the changed timing and also by the smaller family size, in itself. Changes that have been stimulated in part by a reduction in family size include a redefinition of the maternal role. After the child-bearing period, the full time and energies of most mothers are no longer completely absorbed by family responsibilities, thus expanding opportunity to participate in life outside the home, a step often linked to the assumption of part responsibility for the financial support of the household. Other changes, related to reduction in family size, are the increasing significance which is being placed on companionship between husband and wife, changes in child-parent relationships towards becoming less formal, but often more inclusive, and a tendency for household organization to become less rigid.

Trends in family size, which are of such obvious importance as an influence on family behavioural patterns, are described and analyzed in this chapter. The term, family size, is used in the demographic sense, meaning the number of live births to married women by the end of their

reproductive periods, not the number of children living with their parents in a family unit. While the latter is important in any attempt to understand the family and will be used at a later stage of the study, it is a fluctuating measure not suited to the study of trends. The next two chapters also relate to family size. Chapter IV begins an inquiry into variations in family size within New Zealand. Trends are outlined for a variety of social subgroupings, which is one way of breaking down the national trend into components to gain further insights into how and why it has occurred. Chapter V continues the analysis of fertility differentials through a comparison of those in New Zealand with those in some other countries at broadly similar stages of social development, Great Britain, the United States and Australia, again in an attempt to understand the New Zealand changes in average size of family.

Trends in Family Size

Table 3.1, below, shows the average number of births in completed families by marriage cohort.

(See Table 3.1, page 55a)

As Table 3.1 indicates, average family size was declining sharply over the reproductive period of women married between 1880 and 1891; and, although national figures are not available, other sources, such as the Wellington Family Survey findings, show that the decline continued through the following decade. The trend of decrease continuing over marriage cohorts 1913-29 is again documented by a study using national statistics, as is the slow increase with the marriage cohorts of the 1930s, continuing with those of the 1940s until the cohorts of 1944-46 show a spectacular increase.

The cross-sectional birth rates associated with the trend in average

family size are shown for census years from 1881 in Table 3.2, below. This table will be used in the subsequent analysis of changes in average family size.

(See Table 3.2, page 56a)

Basic to an attempt to explain these trends is the realization that they are largely determined by changing family size norms and the success with which the norms at any time are actualized. Both biological and social factors contribute to the level of success achieved by individual married couples. Under-achievement is frequently due to fecundity impairments. As trends, however, are drawn from aggregate performance and there has been no evidence to suggest that levels of fecundity have changed significantly over the century, biological factors will be largely ignored in the following discussion and the focus will be on social factors which influence people as groups.

From earliest times, societies have had at least broad ideas on appropriate family size, and various forms of encouragement and control have been used to keep families within this size range. In recent times, with greater acceptance of family planning together with the availability of more efficient means of fertility control, the range of socially desired family sizes has tended to narrow. The range, at any one time, is mainly determined by the relative strength of two conflicting tendencies, a tendency to perpetuate the norms of the immediate past, and the other, to modify these in the light of changing circumstances. Translation of norms into fertility behavior is affected by the quality and availability of contraceptive methods, their acceptability, and the efficiency with which they are used. Additionally, changed circumstances, particularly a crisis

TABLE 3.1

AVERAGE NUMBER OF BIRTHS PER MARRIED WOMAN WITH COMPLETED FAMILY, BY MARRIAGE COHORT

New Zealand -- Non-Maori

A. Marriage Cohort	Live Births	
	Number	To Women with Issue
(Ca) 1880	6.5	6.9
" 1881	6.2	6.6
" 1882	6.1	6.5
" 1885	5.7	6.1
" 1886	5.2	5.7
" 1887	5.4	5.7
" 1891	4.7	5.2

B.	Live Births				
	Number	To Women with Issue	Marriage Cohort	Number	To Women with Issue
1913	3.3	3.7	1927	2.4	3.0
1915	3.1	3.5	1929	2.4	3.0
1917	3.0	3.3	1931	2.5	3.0
1919	3.0	3.3	1933	2.6	3.1
1921	2.5	3.1	1935	2.6	3.2
1923	2.4	3.0	1936	2.6	3.2
1925	2.4	3.0			

C.	Live Births -- Ages at Marriage 15-49 Years				
1936	2.7	-	1942	2.7	-
1937	2.7	-	1943	2.7	-
1938	2.7	-	1944	2.8	-
1939	2.6	-	1945	3.0	-
1940	2.8	-	1946	2.9	-
1941	2.7	-			

Notes on Table 3.1:

A. Source: Census reports on Fertility, 1911, 1916, 1921. Fertility estimated as complete at marriage durations, 29 to 31 years. 1911 not stated, distributed according to proportion childless in 1916.

B. Source: E. G. Jacoby, "A Fertility Analysis of New Zealand Marriage Cohorts," Population Studies 12, No. 1 (1958): 24. Calculation of number of births in each cohort, while marriages intact. All ages at marriage. The study was done by single-year cohorts, 1913-36.

C. Source: K. G. Basavarajappa, "Recent Trends and Patterns of Non-Maori Fertility in New Zealand," Journal Biosoc. Sci. 1 (1969): 106.

Cumulative fertility rates for cohorts married at ages 15-49 years.

TABLE 3.2

NUMBER OF LIVE BIRTHS PER 1000 MARRIED WOMEN, 15-44 YEARS, AS IN CENSUS YEARS FROM 1881.
NON-MAORI

Year	Birth Rate	Year	Birth Rate
1881	315	1921	182
1886	298	1926	167
1891	279	1936	137
1896	255	1945	167
1901	246	1951	173
1906	235	1956	177
1911	212	1961	187
1916	194	1966	144

Source: New Zealand Official Yearbooks.

situation, such as a war or severe economic depression, can alter fertility behaviour without necessarily changing norms related to ideal family size. These generalizations apply to family size trends in societies as a whole and also to differences in the fertility behavior of distinctive social subgroupings.

Bearing in mind, then, that family size is largely the result of fertility norms and the possibilities of putting these into practice, three stages of the New Zealand trend will be discussed: the decline shown for marriage cohorts 1880-91; the low in the 1920s and slight recovery with the marriages of the 1930s; the increase shown for those who married around the end of World War II, and later developments.

As suggested by the decline in annual fertility rates from 1881, shown in Table 3.2, family size had begun to decline in New Zealand even before the completion of the reproductive periods of cohorts married around 1880. Such declines, beginning at various points in time during the nineteenth and early twentieth centuries, have been documented for all western societies. The decline in the United States had begun much earlier than that in New Zealand, probably around 1810.[1] However, there was a marked similarity in the timing of the initial decline in Great Britain and New Zealand, and in the trend over the marriages of the 1880s and 1890s, as indicated by a comparison of the New Zealand figures with those in Table 3.3, below.

(See Table 3.3, page 57a)

The marked similarity of the British and New Zealand trends in this period

[1] C. V. Kiser, W. H. Grabill, and A. A. Campbell, Trends and Variations in Fertility in the United States (Cambridge: Harvard University Press, 1968), p. 272.

of rapid decrease in average family size suggests that New Zealand's socio-cultural inheritance had a strong influence on the size and timing of the decline. However, it is theoretically possible that the New Zealand trend was shaped solely by the fertility response to conditions peculiar to New Zealand, and its similarity to the British trend was mere chance. These are possibilities to be evaluated.

Explanations of the fertility declines in this period in Europe, and in overseas countries settled by Europeans, have followed two complementary lines. One line of explanation emphasizes the increased direct and indirect costs of having children, leading to a reevaluation of family size norms.[2] The other posits the development of rational attitudes towards family planning and a progressive increase in the proportion of the population able to plan successfully, thus increasing the likelihood that norms would be actualized.[3] Both hypotheses have been linked with the effects of the Industrial Revolution. Urbanization, which accompanies industrialization,

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[2]For example: C. P. Blacker, "Stages in Population Growth," Eugenics Review 39 (1947): 88-102; W. S. Thompson, Population and Peace in the Pacific (Chicago: University of Chicago Press, 1946); Kingsley Davis, "The Theory of Change and Response in Modern Demographic History," Population Index 29 (1963): 345-66.

[3]For example: J. A. Banks, Prosperity and Parenthood (London: Routledge and Regan Paul, 1954); J. M. Beshers, Population Processes in Social Systems (New York: Free Press, 1967). Both these authors link the development of rational planning with socio-economic change. Banks contended that a depression beginning in Britain in the 1870s encouraged the middle classes to restrict the size of their families in order to preserve the differential between their living standards and those of the lower classes. The choice to preserve the differential through this method was influenced by the extensive publicity on birth control surrounding the Bradlaugh-Besant trial in 1877. Beshers accepted the Banks' hypothesis and linked it to a theory of the break-up of traditional social organization and the development of a rational organization, derived from the writings of Max Weber.

TABLE 3.3

AVERAGE NUMBER OF BIRTHS PER MARRIED WOMAN WITH COMPLETED FAMILY BY MARRIAGE COHORT FOR ENGLAND AND WALES

Marriage Cohort	England and Wales[1]	Marriage Cohort	England and Wales[1]
1881	5.3	1920-24	2.3
1886	4.8	1925-29	2.1
1890-99	4.1	1930-34	2.1
1900-09	3.3	1935-39	2.0
1910-14	2.8	1940-44	2.1
1915-19	2.5	1945-49	2.2

[1]Source: Derived by E. A. Wrigley, Population and History (London: Weidenfeld and Nicholson, 1969), p. 197, from Registrar-General Statistical Review for 1961, pt. III, 70, Tab. xlii and Statistical Review for 1963, pt. III, 75, Tab. C44. Includes women married at ages under 45 years only. Some estimation used in calculating the completed family sizes of marriage cohorts more recent than 1935-39. For comparative purposes, data for Great Britain would have been preferred as many New Zealand migrants came from Scotland and Ireland. However, for years where these figures can be compared with those for Great Britain, the discrepancy is small.

is seen as responsible for much of the increasing cost of children; for, in the town, children are economically less productive and all necessities must be bought rather than produced. Additionally, an industrial society demands higher levels of training and skills in its workers, thus increasing the costs of children through their need for a more extensive education. The extra material goods and opportunities which are available more readily to those with smaller families are again seen as resulting from industrialization and urbanization. The second hypothesis, postulating an increase in planning orientation and ability, has been linked reflexively with the higher level of organization required in an industrial society.

While these hypotheses may go some distance in explaining the fertility decline in Great Britain, they are much less plausible explanations of the New Zealand decline in family size over the 1880s and 1890s. At this time, the majority of people lived on farms or in small market and service towns, and urban industry had made only a small beginning.[4] However, the New Zealand decline can be partly explained as an indirect effect of industrialization in Great Britain. As noted in the introductory outline of New Zealand's social development, her British immigrants brought the social norms associated with industrialization and proceeded to give them structural form. It is worth restating that New Zealand sometimes gave practical expression to changing values even more rapidly than Britain. For example, steps towards the emancipation of women, regarded to some extent as a side-effect of industrialization and also as a contributory factor in the decline in family size, began earlier

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[4] J. B. Condliffe, New Zealand in the Making, 2nd Imp. (London: George Allen and Unwin, Ltd., 1963), p. 39.

in New Zealand, through the granting of female suffrage and the admission of women to most university degrees well before the end of the nineteenth century. In addition to reproducing the sorts of structural conditions which have been associated with the fertility decline, the colonists undoubtedly transferred the family size norms related to their time of migration. In short, it is argued that the New Zealand fertility decline was heavily influenced by the norms and practices in Britain throughout the second half of the nineteenth century.

While the trend of fertility decline was similar to that in Britain, the New Zealand family was somewhat larger, on the average. This is also partly explicable in terms of socio-cultural inheritance. A disproportionately large number of New Zealand colonists came from the British working and lower-middle classes, so that New Zealand fertility norms and practices would have been weighted in that direction. The average family size of manual workers in Britain was significantly larger than the average in the total population. In the marriage cohort of 1890-99, for instance, wives of manual wage earners had an average of 4.85 births in contrast to the 4.34 to wives of men in all occupational groupings.[5] A supplementary explanation, related to cultural inheritance, is that colonists would have been most heavily influenced by the norms and practices current at the time of their emigration. Many, therefore, would have formed their ideas on family size in a period of relatively high fertility, before the 1880s.

Although socio-cultural inheritance from Britain strongly influenced fertility behavior in New Zealand in the colonial period, it cannot

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[5] D. V. Glass and E. Grebenik, The Trend and Pattern of Fertility in Great Britain. A Report on the Family Census of 1946. Papers of The Royal Commission on Population, VI. London: H.M.S.O., 1954, p. 110. Figures for intact marriages where wives were married at ages under 45 years.

completely explain family size patterns and trends. Other influences stemmed from the immigration process and from social conditions in New Zealand. First, immigrants had smaller families, on the average, than women born in New Zealand. The differential, described more fully in the next chapter, is typically associated with conditions of resettlement, especially when migrants come from a country with lower or similar levels of fertility to those in the country of destination. Although present data are insufficient to detail the effects of trends in migration rates on average family size, it is clear that the large component of immigrants in the New Zealand population over the nineteenth century provided a depressive effect on fertility rates. An important New Zealand occurrence which influenced the timing of the fertility decline was the severe economic depression of the 1880s, following in the wake of a spending boom in the 1870s, which had managed to delay the economic collapse. The depression was accompanied by a rise in marriage age and a restriction of births within marriage, triggering off the fertility decline. However, the continuing decline, as economic conditions improved towards the end of the century, requires a different style of explanation. Economic fluctuations are typically associated with fluctuations in the birth rate, overall socio-economic development, with long-term trends. It is suggested that the continued decline was stimulated by gradual change in socio-economic structure and by an increase in planning orientation associated with attempts to achieve higher living standards in a country still largely dependent on export earnings from primary production for its economic support.

In summary, illustrations of the probable links between the decline in the New Zealand and the British average family size over the late

nineteenth and early twentieth century, and some purely New Zealand influences on the decline, have been suggested. Each type of influence undoubtedly contributed to the trend.

Average family size continued to decline through the first decades of the twentieth century, reaching a turning point with the 1930 marriage cohort. A similar trend was experienced in England and the United States, but recovery began earlier in New Zealand than in either of those countries. The trend in the family sizes of the marriage cohorts of the 1920s and 1930s is a reflection of the fertility responses to the worldwide economic depression from the late 1920s to the mid-1930s. In New Zealand, marriage age and marital fertility were both affected by the adverse economic conditions.

The effect on marital fertility can best be examined through a comparison of annual rates (Table 3.2) and cohort fertility over this period. Annual rates declined steadily through the 1920s, reaching their lowest point in 1935. Average family sizes, however, were almost identical amongst the 1923-29 single-year marriage cohorts, and then a slow increase began. It appears that the family sizes of the marriages of the 1920s were more affected by the unfavorable conditions than those of the 1930s. The explanation is probably as follows: Because many of the women who married in the earlier decade already had children before the worst depression conditions occurred, the fertility response of these cohorts was weighted toward forgoing later births, while the response in the cohorts of the 1930s was largely toward postponement of births until conditions improved. This hypothesis is supported by evidence on birth timing and spacing. Jacoby (pp. 31-32) demonstrated a progressive increase in the length of time taken to complete families over this period, while Family

Survey findings (Chapter VI) indicated that the average interval between births in the 1927-37 marriage cohort was greater than those in subsequent cohorts with completed fertility. This pattern revealed an ability to adjust fertility behavior to contemporary social conditions but, even more important, it showed a pressure toward the actualization of family size norms.

A sharp increase in the birth rate after World War II, experienced by almost all developed countries, was related to the establishment of new marriages and the reestablishment of others during a period of relative economic prosperity. In New Zealand, the peak birth rate in 1947 was followed by a period of high rates culminating in a second peak in 1961, then a decline to 1967, when an increasing proportion of marriages pushed up the rate per 1000 population, though no increase in marital fertility rates occurred. In the United States, the decline began somewhat earlier, in 1958, while the British pattern was quite different, a decrease in the first half of the 1950s, followed by an increase well into the 1960s. It is clear that New Zealand fertility patterns had diverged widely from the British by this period and were much more like those in overseas countries settled by Europeans, such as the United States and Australia,[6] both in level and trend.

The high birth rates in New Zealand in the late 1940s and the 1950s did result in an increase in average completed family size. This is illustrated for marriage cohorts 1944-46 in Table 3.1. Additionally, Family Survey data demonstrated for an urban population that the average family size of marriage cohort 1947-52 was larger than that of any five-

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[6]W. D. Borrie and Geraldine Spencer, Australia's Population Structure and Growth (Melbourne: Committee for Economic Development of Australia, 1964), pp. 23-33.

year cohort between 1922 and 1947. The increase resulted from a reduction in the proportions of women with fewer than two children, a slight increase in the proportion with five or more and, most important, from an increase in the proportion having the higher numbers within the two to four children range. In other words, it did not appear that family size norms had changed, but that circumstances favorable to fertility had allowed more couples to achieve an "ideal" family size.

Family Survey data on expected births suggested that average family sizes would be somewhat smaller for marriage cohorts 1952-67 than that of 1947-52, but that the decrease would not be as drastic as might be inferred from the rapid decline in birth rates after 1961. This decline has been popularly attributed to the general availability of the contraceptive pill from 1962 and, as illustrated in the next chapter, the pill appears to have been used by a significant number of married women. It will be appreciated, however, that the decrease in birth rates could have resulted from a temporary delaying, rather a complete postponement of births, and whether the pill has been used mainly to regulate the timing and spacing or to restrict numbers of births per woman so as to result in a continued decline in average family size, is a question to which the Family Survey data can give a partial answer. According to the data on birth expectations, each five-year marriage cohort from 1952-67 would achieve an average family size of just under three children, a reduction from that of cohort 1947-52, but not a marked change. A change in spacing was suggested by the longer average interval between marriage and first birth in the 1952-57 and 1957-62, than in the 1947-52 marriage cohort. The data do not permit a complete analysis of the association between the declining birth rate and the eventual average family size of the married women in

the reproductive ages, but they do indicate that the decline has resulted partly from a change in the timing of births and partly from a real decrease in number of births expected, the latter affecting completed family size.

A final topic to be analyzed in this chapter is the trend in the distribution of family sizes. The proportion of couples with six or more children decreased from 56 percent of the 1880-82 marriage cohort to less than 8 percent of the 1925-29.[7] Amongst the cohorts of 1925 to 1936, the proportion fluctuated slightly, but no real change occurred. For the most recent period, Family Survey data indicated that the proportion of large families increased slightly with the marriages occurring soon after World War II, but if the average number of births to more recent cohorts approach expectations, the proportion with six or more children will shrink to some 3 percent of married couples, at least in city populations. The overall trend, then, has been towards a substantial reduction in the proportion of large families. At the other end of the scale, the percentage of married women with fewer than two children increased over the early years of the century, rising to almost 40 percent for most of the marriage cohorts of the 1920s. It has declined subsequently and indications from the Family Survey are that the decline will continue for marriage cohorts up to 1967. The trend from the 1930s, then, has been a fairly consistent increase in the proportion of couples with two to four children.

According to findings from the Wellington Family Survey, the trend matches majority opinion on the ideal number of children in a family. Most respondents, when asked their opinion, gave an answer within the two to four children range, as shown in Table 3.4, below.

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[7]New Zealand Census Report, Conjugal Condition of the People, April, 1911, p. 283. Jacoby, p. 25.

(See Table 3.4, page 66a)

The New Zealand pattern is typical of that in economically developed countries. Short-term fluctuations in average family size during the century are partly due to variations in the proportion of couples with fewer than two children. The major explanation of family size trends, however, lies in the reduction in the proportion of large families and the tendency for an increasing majority of couples to have families of three or four children in favorable conditions, two, in less favorable. It appears likely that family size norms in the two-to-four-children range have been common in developed countries for at least forty years.

TABLE 3.4

OPINIONS OF THE IDEAL NUMBER OF CHILDREN FOR AN AVERAGE NEW ZEALAND COUPLE TODAY

Total Sample

Number of Children	0 or 1	1 or 2	2 to 2 or 3	3 to 3 or 4	4	4 or 5	5+	As They Come	Don't Know	Total
Number of Responses	2	9	156	292	285	17	17	10	54	942
Percentage	0.2	1.0	27.2	31.0	30.2	1.8	1.8	1.1	5.7	100.0

Source: Family Survey.

CHAPTER IV

FAMILY SIZE: NEW ZEALAND DIFFERENTIALS

Introduction

Further insights into influences on changes in family size can be gained by an examination of trends within population sub-groupings, which vary from one another in social opportunities, interests and values. These differences frequently include variations in fertility norms, in fertility-related conditions and in levels of success in putting fertility norms into practice. In this chapter, trends in family size differentials amongst some social sub-groups are outlined and an attempt to account for the differentials is begun through a comparison of actual family size and opinions of ideal family size. The search for explanation is continued in the next chapter through a comparison of differentials in New Zealand with those in some other countries.

With the main exception of a comparison of urban-rural fertility, based on census statistics, the Wellington Family Survey is the present source of data. Findings were obtained from multivariate analyses and from cross-tabulations of demographic and social variables. Trends were obtained from the multivariate analyses through the division of the sample into three marriage periods: Marriage Period 1898-1927 refers to respondents' mothers who had married between these dates; Marriage Period 1922-52, to respondents who had married between August 1922 and July 1952, and who were assumed to have completed their families; Marriage Period 1952-67 refers to respondents who

had married between August 1952 and July 1967, many of whom had not completed their families at the time of the interview. In the cross-tabulations, trends were assessed through the use of five and ten-year marriage cohorts. Differentials were measured by a comparison of the mean family sizes of subgroups and the statistical significance of the difference assessed by *t* tests. Individual *t* values are not given in the following discussion; but, where the difference between means is claimed to be statistically significant, the level of significance is at least five percent.[1]

Trends in Family Size Differentials

Table 4.1, below, shows the results of multivariate analyses of the number of births achieved or expected by married women in the three marriage periods.

(See Table 4.1, page 68a)

The F columns in the table, above, indicate the level of statistical significance of the contribution of each of the variables to the explanation of variance in family size, with the combined effect of the other variables excluded. The bottom row gives a percentage assessment of the amount of variance explained by the sum of the independent variables, used in each test.[2]

The amount of variance in family size explained by the variables in the tests outlined in Table 4.1 ranged around 20 percent, apart from Test 5, an analysis of numbers of births to women still in the child-bearing stages where the numbers of years married was, of course, highly significant,

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[1] Readers interested in examining the statistical basis of the study in more detail are referred to the thesis on which this book is based. Miriam Gilson Vosburgh, Some Social and Demographic Influences on New Zealand Family Structure from 1886 (Victoria University, 1971). Ph.D. thesis in Victoria University Library, Wellington.

[2] The categories of the variables are listed in Appendix A.

TABLE 4.1

MULTIVARIATE ANALYSES OF FAMILY SIZE FOR THREE MARRIAGE PERIODS, LISTING THE INDEPENDENT VARIABLES AND THE SIGNIFICANCE OF THEIR INDIVIDUAL AND COMBINED CONTRIBUTION TO EXPLANATION OF THE VARIANCE IN FAMILY SIZE

Independent Variables	F Ratios					
	Marriage Periods					
	Mothers' 1898-1927		1922-52		1952-67	
	1	2	3	4	5	6[1]
Marriage Cohort (5-year groups)	6.2*	5.5*	1.5	2.2	98.8*	0.4
Times Married	4.8*	3.8*	4.0*	13.3*	2.3	4.6*
Age at Marriage, Wife	-	-	17.4*	-	7.0*	11.8*
Childhood Residence, Wife	-	-	2.6*	-	-	0.1
Occupation, Husband	5.4*	5.4*	1.4	-	3.2*	1.2
Occupation before Marriage, Wife	-	-	1.4	1.6	-	0.6
Education, Wife	-	-	0.3	-	-	0.5
Education, Husband	-	-	0.4	-	-	0.1
Religious Denomination, Wife	-	-	7.7*	9.3*	3.1*	1.6
Church Attendance, Wife	-	-	2.2*	-	-	1.4
Employment Pattern since Marriage, Wife	-	1.2	-	21.2*	-	-
Duration of Marriage	5.7*	4.9*	-	-	-	-
Period of Residence in New Zealand, Mother	1.5		-	-	-	-
Denomination of Subject's Upbringing	5.8*	6.5*	-	-	-	-
Percentage of Variance Explained	18.6	18.8	22.7	21.9	42.5	22.2

Source: Family Survey.

[1]Test 6 analyses expected births, all others, achieved births.

*Contribution to explanation of variance in family size statistically significant at, at least, the 5 percent level.

increasing the explained variance to over 40 percent. Although the level of explanation was not high, it was sufficient to demonstrate a link between fertility variations and some aspects of social structure.

The present study was not designed to explore all potential sources of variation in family size, but it is worth noting one important source, not included in the study. It could well be true for New Zealand, as Sagi and Westoff claimed from fertility research in the United States, that perhaps half the variance in family size is unintended, arising from such factors as fecundity, pregnancy wastage and chance variation in the occurrence of conception, in short, from factors which are not necessarily correlated with social variables.[3]

To help explain the variations in family size, an assessment was made of sub-group differences in family-size norms. Respondents were asked their opinions on the ideal number of children for the average New Zealand couple, today. It will be appreciated that the question could elicit only present opinions. However, it is highly probable that any sub-group differences that were demonstrated had existed over time, as there is a marked tendency towards the convergence of fertility norms in western societies, rather than the reverse. The results of the analysis are shown in Table 4.2, below.

(See Table 4.2, page 69a)

Amongst the women in Marriage Period 1922-52, significant differences in family-size norms were found according to religious denomination, church attendance and age at marriage. Roman Catholics and church attenders had larger family-size ideals than Protestants and non-church-goers, respectively,

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[3] P. Sagi and C. Westoff, "An Exercise in Partitioning Some Components of the Variance in Family Size." In Emerging Techniques in Population Research (New York: Milbank Memorial Fund, 1963), pp. 130-40.

and their present norms were largely consistent with their average completed family sizes. However, ideal family sizes by age at marriage did not match actual sizes. Those who had married at 30 years or later had higher family-size ideals, but smaller families, than those who had married younger; and, although the norms of the 15-19, 20-24, and 25-29 age groups at marriage were almost the same, those who had married at the younger ages within this range had significantly larger families, on the average, than those who had married at the older ages.

Most of the independent variables did not differentiate family-size norms. There were no differences by occupational status and this was largely consistent with fertility performance. Childhood residence was not a significant indicator, but tendencies towards differences took the same direction as differences in average family sizes, the ideals of native New Zealanders being somewhat larger than those of migrants. No significant differences were found amongst five-year marriage cohorts. This could indicate a change in family-size norms, especially amongst those who had married in the 1920s and had a relatively small average family size. However, a more likely interpretation of the discrepancy between the family sizes and the fertility norms of these women is that adverse socio-economic conditions had prevented some from having as many children as they would have liked.

The consistency of the present family-size ideals of most social sub-groupings with their average completed family sizes raises the question of whether the opinions on ideal family size provided a measurement of sub-group norms, as had been claimed, or whether the answers were merely a rationalization of the respondents' own family sizes. However, analysis showed that there was little correlation, $r = 0.12$, between a respondent's opinions on ideal family size and the size of her own family, eliminating rationalization as an explanation of differences in ideals and supporting

TABLE 4.2

MULTIVARIATE ANALYSES OF OPINIONS ON THE IDEAL SIZE OF FAMILY, TODAY, FOR TWO MARRIAGE PERIODS, LISTING THE INDEPENDENT VARIABLES AND THE SIGNIFICANCE OF THEIR INDIVIDUAL AND COMBINED CONTRIBUTION TO EXPLANATION OF THE VARIANCE IN OPINIONS[1]

Independent Variables	F Ratios			
	Marriage Periods			
	1922-52		1952-67	
	1	2	3	4
Marriage Cohort (5-year groups)	1.3	-	0.6	-
Times Married	1.5	-	2.1	-
Age at Marriage, Wife		3.0*		0.5
Childhood Residence, Wife	1.9	-	-	-
Occupation, Husband	0.5	0.5	0.7	0.6
Occupation before Marriage, Wife	0.6	-	0.4	-
Religious Denomination, Wife	6.1*	2.1	2.1	1.8
Church Attendance, Wife	-	3.3*	-	0.3
Percentage of Variance Explained	4.7	8.7	3.2	2.2

Source: Family Survey.

[1]Test on women with at least 2 children.

*Contribution to explanation of variance on opinions of ideal family size statistically significant at, at least, the 5 percent level.

the claim that sub-group differences in family-size norms were indeed elicited through this question.

In Marriage Period 1952-67, the social variables in the analyses explained almost none of the variance in opinions on ideal family size. There was some tendency shown for Roman Catholics to have larger family-size norms than Protestants, but the difference did not reach the five per cent level of significance. Apparently, differences in family-size norms, according to membership of the social sub-groups examined, have practically disappeared amongst the most recently married group of respondents.

Using this analysis of the variation in family-size norms by social sub-groupings as one component of explanation, the effects of each independent variable introduced into the tests outlined in Table 4.1 will now be described and some explanation attempted.

Five-Year Marriage Cohorts

There was a continuing decline in the average family size of women who had married between 1898 and 1927. The test demonstrated this trend with the effects of the other independent variables accounted for, indicating that there was a real decrease in family size over this period as it could not be explained by a change in the social composition of the population. The sharpest decrease occurred amongst those who married around the end of the first decade in the twentieth century. Other points worth noting are that, in Marriage Period 1922-52, the cohort of 1947-52 had a larger average family size than the others in this period and that the three cohorts in Marriage Period 1952-67 expected almost identical family sizes on the average, slightly smaller than that of cohort 1947-52.

Overall, the trend shown in the Wellington Family Survey was almost identical with the national trend, insofar as the latter could be documented.

Times Married

The contribution of this variable to an explanation of variance in family size needs little discussion. Women in second or later marriages were asked about births to present marriage only. It was no surprise to find that these women, marrying at a much later average age and possibly with children from a previous marriage to care for, had a smaller mean family size than women in first marriages. The variable was introduced into the tests so that the influence of an uneven distribution of remarriages over the categories of other social variables would be excluded.

Age at Marriage, Wife

In both marriage periods 1898-1927 and 1922-52, a perfect inverse relationship was found between age at marriage and number of births.[4] Women who had married at ages between 15 and 19 years, had larger numbers of children than those marrying at any later age; similarly, those who had married between 20 and 24 years, and those who had married between 25 and 29 years had larger families than those who had married at 30 years or later. All differences were statistically significant.

Total fertility rates, calculated from national statistics, as shown in Table 4.3, below, illustrate the actual differences in average family size by age group at marriage for part of Marriage Period 1922-52.

(See Table 4.3, page 72a)

Table 4.3 shows a slight tendency towards a decline in fertility differentials, especially between the 15-19, 20-24, and 25-29 age-at-marriage groups and, according to family-survey data, the decline has continued. In

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[4] Findings for the mothers' marriage period were derived from a multivariate analysis of factors influencing age at marriage, using the same variables as Test 2, Table 4.1.

TABLE 4.3

AVERAGE NUMBER OF BIRTHS PER WOMAN TO NON-MAORI COHORTS, MARRYING AT SPECIFIED AGES, 1936-46

Marriage Cohort	Age at Marriage (Years)				
	15-19	20-24	25-29	30-34	35-39
1936	3.8	3.1	2.6	1.7	0.7
1937	3.6	3.1	2.5	1.8	0.8
1938	3.6	3.1	2.5	1.7	0.7
1939	3.7	3.0	2.4	1.7	0.8
1940	3.8	3.2	2.6	1.7	0.8
1941	3.5	3.1	2.6	1.7	0.7
1942	3.3	3.0	2.6	1.8	0.8
1943	3.2	3.0	2.6	1.7	0.8
1944	3.0	3.0	3.0	2.0	1.0
1945	3.8	3.4	2.9	1.9	0.9
1946	3.6	3.3	2.9	2.0	0.9

Source: K. G. Basavarajappa, "Recent Trends and Patterns of Non-Maori Fertility in New Zealand," Journal Biosoc. Sci. 1 (1969): 106.

Marriage Period 1952-67, little difference was found between the achieved or expected births of these three age-at-marriage groups. The only statistically significant differences were between each of these three age groups and that of women who had married at 30 years or later, who had and expected a smaller number of births than those married younger.

The decline in the strength of the association between family size and age at marriage, illustrated from the time of the 1936 cohort, resulted from a differential decrease in average family size to younger and older marriages when family size was declining overall and a differential increase when fertility was rising. This suggests that the trend was due partly to differential responses to social conditions and partly to greater control of fertility within marriage so that a longer exposure to the risk of conception did not have to lead to a larger number of births. The second reason is probably the more important. The existence of the differential by age at marriage has been largely due to the combination of incomplete fertility control and variations in the length of exposure to the risk of pregnancy. A decline in the size of the differential has occurred with increasing efficiency in birth control.

A supplementary explanation of the differential might have been that those who married younger wanted larger families. This was tested by reference to the multivariate analysis of factors associated with variations in opinions on ideal family size, as shown in Table 4.2 , above. It appeared that there were no real differences amongst the average ideal family sizes of those married at 15-19, 20-24, or 25-29 years. The only statistically significant differences found were between these groups and those who had married at 30 years or over. The latter group had somewhat larger family-size ideals. It is likely that in many of these older marriages, women had

found it difficult to have as many children as they wanted and this had probably influenced their attitudes towards family size.

As this analysis showed, there were no differences in fertility norms that could help explain the existence of the age-at-marriage differential or its decline and so it may reasonably be assumed that the major explanation lies in changing levels of fertility control within marriage.

Childhood Residence

For Marriage Periods 1922-52 and 1952-67, childhood residence was categorized according to whether respondents and husbands had lived mainly in urban, rural or overseas places up to the age of at least 14 years.

As Table 4.1 indicates, the childhood residence of the wife was associated with variance in family size in Marriage Period 1922-52. In this period, New Zealanders of both rural and urban origin had a larger average family size than those who had spent their childhood overseas. The same association was demonstrated for Marriage Period 1898-1927 through a finding that women who were born in New Zealand or had immigrated before they were of school age had rather larger families on the average than those who had come to New Zealand at a later stage in their lives. The differential had disappeared by the most recent Marriage Period, 1952-67. Reasons for the smaller family size of migrants who had married before the middle of the twentieth century are probably found in their retention of the smaller family-size norms of most of their countries of origin and in conditions associated with resettlement. Unfortunately, the relative strength of these influences could not be assessed from family-survey data.

The most interesting finding on the effects of childhood residence on family size was a negative one. No differences were found between the average number of births to women brought up in rural and urban places in

New Zealand, nor were there any differences in birth expectations according to this variable. This was an unexpected finding, as several overseas studies, as discussed in the next chapter, have found a larger average family size amongst city dwellers with a rural background than amongst those with an urban. The differential has been linked to the retention of the higher rural fertility norms by in-migrants to towns and cities. Consequently, because type of childhood residence has often been found to be an important fertility indicator, it was decided to explore the New Zealand data further, to discover any association which had not been exposed by the multivariate analyses. It was hypothesized that any differences in fertility norms or practices resulting in family-size differentials would be shown more clearly by examination of the family sizes of couples with the same residential background, and so exposed to less varied fertility influences in childhood. Table 4.4 shows the results of the examination for Marriage Periods 1927-52 and 1952-67.

(See Table 4.4, page 75a)

The results of the analysis, shown in Table 4.4, do not differ from those using the childhood residence of the wife only, as an independent variable. The only statistically significant difference between any two means within marriage periods was that between those with urban and overseas backgrounds in Marriage Period 1927-52. In short, it appears that there have been no real family-size differences in New Zealand between urban residents with rural, as opposed to urban, backgrounds, at least since the marriages of the later 1920s.

The absence of this differential in a country where urban-rural fertility differentials have persisted for at least eighty years, as will

be demonstrated, supports the hypothesis that rural-urban movement has been one of the influences towards a decline in average family size in New Zealand; certainly through its effect on the fertility levels of in-migrants to towns and cities, and probably through its contribution to the diffusion of urban norms and contraceptive practices amongst the rural population.

Occupation, Husband

All developed countries have experienced a demographic transition from high to low fertility and mortality rates. Where the trend has been analyzed in detail, it has been shown that family size was restricted earlier amongst those of higher socio-economic status. This offers support to the theory, previously advanced, that the decline in family size was associated with an increase in planning orientation and ability. The more highly-educated classes were better equipped to develop these attitudes and skills and to use them to restrict their fertility in the light of the greater rewards that economic development could make available to those with smaller families. As the belief that the rational planning of births was possible and desirable spread through the population, and ability to control births increased, family size began to decline in the lower socio-economic groupings, reducing the class fertility differential in some countries and eliminating or partially reversing it in others. It is of interest to examine the New Zealand experience in the light of these general patterns.

The variable, Occupation of Husband, was used as the major indicator of socio-economic status in the multi-regression analyses from which findings are reported. The choice of a single variable as a main index was guided by the results of factor analyses of family-survey data, which showed high intercorrelations amongst the usual indicators of status, occupation,

TABLE 4.4

PERCENTAGE OF SUBJECTS WITH SPECIFIED NUMBER OF BIRTHS AND MEAN NUMBER IN MARRIAGE PERIODS 1927-52 AND 1952-67, BY SAME TYPE OF CHILDHOOD RESIDENCE, HUSBAND AND WIFE.[1]

First Marriage, Wife.

Childhood Residence (Husband and Wife)	Number of Births						
	Percentage with:				Mean	No. of Cases	Marriage Period
	0-1	2-3	4-5	6			
Urban	22.0	46.6	26.7	4.7	2.8	236	1927-52
Rural	14.3	57.1	28.6	-	2.6	14[2]	Births
Overseas	35.0	48.3	13.3	3.3	2.2	60	
Urban	5.8	60.6	32.9	0.7	3.0	137	1952-67
Rural	20.0	66.7	-	13.3	2.7	15[2]	Expected Births
Overseas	11.1	70.4	14.8	3.7	2.7	54	

Source: Family Survey.

[1]"Don't know" answers are omitted in this, and in all subsequent cross-tabulations.

[2]The small number of cases in the rural groups reflects a complete lack of association between type of childhood residence and choice of marriage partner with the same background, for present city residents. In Marriage Period 1927-52, only 14 out of 84 women with rural background married men of the same childhood residence group, in Marriage Period 1952-67, 15 out of 53.

education and income. For the multivariate analyses, occupation was divided into the broad categories, professional and managerial, other white-collar, and manual workers, used as a ranking from high to low, with the addition of an undifferentiated category of farming in Marriage Period 1898-1927.

In the earliest marriage period, the professional and managerial group had the smallest average family size, followed by other white-collar workers and then urban manual workers, that is, there was an inverse correlation between occupational status and fertility. The farming group had the largest family sizes, on the average. Occupational status and fertility were not significantly related in Marriage Period 1922-52. An association was found again in Marriage Period 1952-67. However, it had changed in direction from that in Marriage Period 1898-1927. The inverse correlation had disappeared and a U-shaped association appeared to be emerging. The highest status group had the largest families, on the average, followed by the lowest status, and the middle group had the smallest family size. The occupational variable did not differentiate birth expectations which were remarkably uniform.

As occupational status had changed its association with variations in fertility over time, it was examined in detail with a view to establishing a more precise trend. Tables 4.5 and 4.6, below, show the results by ten-year marriage cohorts.

(See Table 4.5, page 77a)

Table 4.5 shows the generally inverse relationship between status and fertility in all three cohorts in the earliest marriage period. However, the separation of the other white-collar category into a higher and lower level suggested that the lowest non-manual group may have already begun to have smaller families than the higher groupings, although the difference did not

reach the five percent level of statistical significance. The most striking difference in family-size distribution was the considerably larger proportion of manual than non-manual workers with six or more children. The overall trend in the period was a substantial decrease in the average family size of all occupational categories, but a more rapid decline in those of higher status levels. All the conclusions drawn from Table 4.5 are supported by statistically significant t values in tests on the differences between mean family sizes, apart from the exception noted.

(See Table 4.6, page 78a)

The inverse correlation between fertility and occupational status was still statistically significant in the 1927-37 cohort, but the differential had decreased. It vanished altogether with the 1937-47 cohort and a tendency for the highest and lowest status groups to have the larger families began to emerge. However, since that time, the trend has been rather weak and inconsistent so that probably the most accurate conclusion to draw from family-survey findings is that there has been a notable lack of relationship between occupational status and achieved or expected family size from the late 1930s.

In summary, an inverse correlation between fertility and occupational status was demonstrated for women marrying around the turn of the century, the correlation increasing in strength as the average family size of non-manual workers declined more rapidly than that of manual amongst the marriages of the first two decades of the twentieth century, weakening with the cohorts marrying after World War I, and completely disappearing with cohorts marrying just before the beginning of World War II. The New Zealand trend, then, has been broadly similar to those of other developed societies. A particular point of interest, however, is a relatively early disappearance of fertility differentials by socio-economic status and reasons for this will be explored

TABLE 4.5

PERCENTAGE OF RESPONDENTS' MOTHERS WITH SPECIFIED NUMBERS OF BIRTHS AND MEAN NUMBER BY THEIR HUSBANDS' OCCUPATIONAL GROUPING AND MARRIAGE COHORT

First Marriage: Duration of Marriage 20+ Years

Occupational Grouping, Husband	Number of Births						
	Percentage with:				Mean No.	No. of Cases	Marriage Cohort
	1	2-3	4-5	6+			
Professional and Managerial	-	36.4	27.2	36.4	4.8	11	1898
Minor Business and Professional	2.7	29.7	29.7	37.9	4.9	37	to
Clerical and Sales	9.1	36.4	18.1	36.4	4.2	11	
Urban Manual	6.7	28.9	15.5	48.9	5.5	45	1907
Farming	-	14.3	21.4	64.3	6.8	14	
Professional and Managerial	12.5	50.0	25.0	12.5	3.4	32	1908
Minor Business and Professional	5.7	60.0	20.0	14.3	3.6	35	to
Clerical and Sales	7.1	39.3	32.2	21.4	3.8	28	
Urban Manual	4.9	32.8	26.2	36.1	4.9	61	1917
Farming	-	22.2	33.3	44.5	5.3	9	
Professional and Managerial	13.1	39.1	47.8	-	3.2	23	1918
Minor Business and Professional	13.6	52.3	20.5	13.6	3.5	44	to
Clerical and Sales	25.9	40.8	25.9	7.4	3.0	27	
Urban Manual	5.4	41.1	32.1	21.4	4.2	56	1927
Farming	4.0	44.0	28.0	24.0	4.0	25	

Source: Family Survey.

TABLE 4.6

PERCENTAGE OF SUBJECTS WITH SPECIFIED NUMBER OF BIRTHS AND MEAN NUMBER BY OCCUPATIONAL GROUPING OF HUSBAND AND MARRIAGE COHORT

First Marriage, Wife.

Occupational Grouping, Husband	Number of Births						
	Percentage with:				Mean	No. of Cases	Marriage Cohort
	0-1	2-3	4-5	6			
Professional and Managerial	24.0	48.0	28.0	-	2.3	25	1927
Minor Business and Professional	33.3	54.2	8.3	4.2	2.1	24	to
Clerical and Sales	21.4	53.6	17.9	7.1	2.8	28	1937
Manual	15.2	54.5	18.2	12.1	3.3	33	Births
Professional and Managerial	22.4	49.2	25.4	3.0	2.8	67	1937
Minor Business and Professional	36.1	45.9	14.7	3.3	2.1	61	to
Clerical and Sales	35.6	40.0	24.4	-	2.2	45	1947
Manual	16.9	61.0	16.9	5.1	2.7	59	Births
Professional and Managerial	13.2	52.6	28.9	5.3	3.0	38	1947
Minor Business and Professional	22.7	40.9	31.8	4.6	2.8	44	to
Clerical and Sales	5.9	58.8	11.8	23.5	3.7	17	1952
Manual	18.8	46.9	28.1	6.2	3.0	32	Births
Professional and Managerial	19.6	53.8	34.6	1.9	3.0	52	1952
Minor Business and Professional	13.0	68.1	15.9	2.9	2.6	69	to
Clerical and Sales	9.4	59.4	28.1	3.1	2.9	32	1962
Manual	11.3	54.8	30.6	3.2	3.1	62	Births Expected
Professional and Managerial	-	70.8	29.2	-	3.0	24	1962
Minor Business and Professional	4.3	56.5	34.8	4.3	3.2	23	to
Clerical and Sales	3.2	74.2	19.4	3.2	2.8	31	1967
Manual	6.5	69.6	21.7	2.2	2.8	46	Births Expected

Source: Family Survey.

in the next chapter.

The disappearance of the inverse correlation between family size and socio-economic status with the marriage cohort of 1937-47 offers a clue towards disentangling the reasons for the rise in fertility rates in the later years of the 1930s. This has usually been attributed to economic recovery from a severe depression and to the introduction of a comprehensive scheme of protective financial benefits by the Social Security Act of 1938. Both were instrumental in adding to economic security and undoubtedly, in combination, did influence the birth rate. The question is: which was the stronger influence? If the expanded Social Security provisions had been the major influence, it would be expected that the increase in birth rates would have been greater amongst the poorer and typically less-secure sections of the population, especially as family benefits initially applied only to this group. Even when it was made universal in 1946, it consisted of a uniform payment for each child, meaning proportionately more for those with lower incomes. Yet it was in this period that the inverse association between fertility and socio-economic status was shown to have disappeared, leaving the general rise in prosperity as a more powerful explanation for the recovery in family size. This argument is not advanced as a definitive explanation, but simply as a contribution towards disentangling the reasons for the reversal of the fertility trend.

Religious Denomination and Church Attendance

For the analysis of associations between fertility variations and religious denomination, the broad categories of Protestant and Roman Catholic were used. The five percent of the sample who did not claim affiliation with either of these groups are excluded from the following discussion. Respondents were asked their denomination, that of their husbands, the denomination in

which they had been brought up, and how frequently they attended church.

As Table 4.1 shows, the religious denomination in which the subject was brought up was a highly significant factor in explaining family-size variance in Marriage Period 1898-1927. Respondents with a Roman Catholic background came from larger families than those with a Protestant. In Marriage Period 1922-52, the religious denomination of wives differentiated family size in the same direction, whether the effects of frequency of church attendance were excluded or not. In Marriage Period 1952-67, the variable again contributed significantly to explaining variance in numbers of births to date. The Catholic women in this period also expected to have somewhat larger completed families, on the average, than Protestant women. However, the statistical significance of the difference disappeared when the effects of frequency of church attendance were excluded. Throughout the period studied, then, Roman Catholics were shown to have had larger average family sizes than Protestants, but there was some indication that the differential was beginning to contract. Findings from cross-tabulations of the denomination and fertility variables illustrate this point. They show that Catholic women had an average of 1.3 more births than Protestants in the mothers' marriage period, 1.2 in Marriage Period 1927-52, but that Catholic women in the most recent marriage period expected an average of only 0.5 more births than Protestants.

The differential by religious denomination was further explored through a calculation of the numbers of births to marriages where both spouses were Protestant, both Catholic, and those which had one Protestant and one Catholic marriage partner. Table 4.7, below, shows the results of the calculations.

(See Table 4.7, page 80a)

TABLE 4.7

PERCENTAGE OF SUBJECTS WITH SPECIFIED NUMBER OF BIRTHS AND MEAN NUMBER BY RELIGIOUS DENOMINATION OF HUSBAND AND WIFE AND MARRIAGE PERIOD

Religious Denomination, Husband and Wife	Number of Births						
	Percentage with:				Mean	Number of Cases	Marriage Period
	0-1	2-3	4-5	6+			
Protestant	25.3	50.3	21.0	3.4	2.5	351	1927-52
Roman Catholic	12.8	34.0	34.0	19.2	3.8	47	Births
One Protestant, One Catholic	18.4	68.4	10.5	2.6	2.4	38	
Protestant	9.7	62.8	26.1	1.4	2.8	207	1952-67
Roman Catholic	7.7	48.7	30.8	12.8	3.5	39	Expected
One Protestant, One Catholic	22.5	55.0	22.5	-	2.4	40	Births

Source: Family Survey.

As Table 4.7 clearly shows, the Protestant/Catholic fertility differential has been sustained completely by families in which both the marriage partners are Catholic. Average family sizes in Protestant and mixed Protestant/Catholic marriages did not differ significantly in the earlier marriage period; and, in the later period, the wives in mixed marriages expected smaller families, on the average, than those expected in marriages where both partners were Protestant, an interesting finding which will later be further analyzed.

At least part of the reason for the Catholic/Protestant difference in average family size is found in group differences in family-size norms, as noted earlier in the chapter. The responses of Catholic women to the question on ideal family size averaged out at 3.6 children, Protestant at 3.1; so that, although it is also possible that some Catholic women had more children than they had really wanted, their larger family sizes were consistent with their somewhat higher family-size norms. The differences in the family sizes of Protestant, Catholic, and mixed marriages also followed differences in family-size ideals. The average ideal size where both spouses were Protestant was 3.1 children, both Roman Catholic, 3.7, Catholic wife and Protestant husband, 3.3, Protestant wife and Catholic husband, 3.0.

Exploration of the relationship between church attendance and family size gave further insights into the differentials by religious denomination. The variable, frequency of church attendance, was divided into three categories: regular, occasional, and never. Frequency of attendance was positively related to family size in Marriage Period 1922-52, even with the effects of religious denomination excluded. The variable was not related to differences in family size in Marriage Period 1952-67. Differences in family-size norms, according to frequency of church attendance, matched the differences in achieved family size.

The results of an examination of the interrelations between religious denomination, church attendance and family size are shown in Table 4.8, below. Because of the small number of Roman Catholics, those who attended church occasionally or never were combined into one category.

(See Table 4.8, page 82a)

As Table 4.8 indicates, there was only a slight difference between both the achieved and expected family sizes of Protestants who attended church regularly and those who attended occasionally or not at all, but a marked difference between those of Catholics divided in the same way. Catholics without strong church affiliations had, and expected, families of approximately the same size as those of Protestants. It appeared that the positive relationship between church attendance and family size had not been strong amongst Protestants and has virtually disappeared, but for Catholics, there has been a continuing, if slightly diminished, association between these variables.

To summarize the findings in this section, it appears that it is the Catholics who are firmly integrated in the Catholic Church and social life, as indicated by frequency of church attendance and choice of Catholic marital partner, who have been responsible for the maintenance of the Catholic/Protestant fertility differential. These findings will be further explored in the next chapter.

Employment Pattern since Marriage, Wife

Throughout the period studied, the employment of married women outside the home has been associated with smaller-than-average family sizes. The variable was divided into the categories of the work since marriage, employment before first birth (whether employed later or not), and not employed

TABLE 4.8

PERCENTAGE OF SUBJECTS WITH SPECIFIED NUMBER OF BIRTHS AND MEAN NUMBER BY RELIGIOUS DENOMINATION AND FREQUENCY OF CHURCH ATTENDANCE, WIFE, AND MARRIAGE PERIOD

First Marriage, Wife.

Religious Denomination and Church Attendance	Number of Births						
	Percentage with:				Mean	No. of Cases	Marriage Period
	0-1	2-3	4-5	6+			
Protestant:							
Regular	23.8	50.8	20.8	4.6	2.6	130	1927-52
Occasional and Never	25.5	51.4	19.9	3.2	2.5	251	
Roman Catholic:							Births
Regular	11.6	48.0	22.7	17.7	3.7	54	
Occasional and Never	24.2	37.1	38.7	-	2.7	17	
Protestant:							
Regular	10.1	56.5	31.9	1.5	2.9	69	1952-67
Occasional and Never	7.8	67.6	23.5	1.1	2.8	179	
Roman Catholic:							Births
Regular	6.7	46.7	35.5	11.1	3.5	45	
Occasional and Never	5.9	76.5	17.6	-	2.7	17	

Source: Family Survey.

before first birth but worked later. Childless women were analyzed as a separate group.

In Marriage Period 1898-1927, those who had worked before first birth had 1.8 fewer children, on the average, than women who had not worked since marriage. The difference, though considerable, did not reach the five percent level of statistical significance because of the small proportion of women who had worked immediately after marriage, only six percent of the sample in this period. In Marriage Period 1922-52, those who had worked before first birth had a significantly smaller average family size than those with no employment since marriage, while those who had worked only after the birth of children had a family size intermediate between those of the other two categories, not significantly different from either. This variable was not appropriate for an analysis of births to women who had not yet completed their families, but an indication of whether work patterns continued to be associated with fertility variable in Marriage Period 1952-67 was obtained from a multivariate analysis of number of years worked since marriage, in which number of births was introduced as an independent variable. Length of time worked was found to be inversely related to number of births; those with fewer than three births had worked longer than those with three to five, and than those with six or more children. Similar results were obtained on an identical test for Marriage Period 1922-52. Table 4.9 illustrates the family-size averages and distributions by employment pattern for wives with at least one child.

(See Table 4.9, page 83a)

Although numbers in some categories are too small for much importance to be attached to their individual distributions and averages, Table 4.9

shows that marital employment, particularly before first birth, has been associated with smaller families. The fact that the association also held for the number of births expected by the 1952-67 marriage cohort indicates its probable continuance for some years. It is possible, however, that employment before first birth will eventually lose its importance as a fertility indicator, for this appears to be becoming an almost universal practice, at least in the cities, as demonstrated in Table 2.5, Chapter II.

Explanation of the nature of the association between employment after marriage and fertility raises a problem not so far encountered in this chapter. It has been claimed that the other social variables discussed have exerted a determinative influence on any variations in family size with which they are associated, rather than that family size influenced social characteristics. This conclusion is justified by the fact that respondents would usually have been established in the particular categories of the other variables, such as marriage cohort, religious denomination and childhood residence, before they began to have children. This is not always true of marital employment. In this case, some of the women who have worked for a period in their married lives have first had children or have no children. The question then arises as to whether employment patterns influence family size, family size influences employment patterns, or whether there is a two-way influence. The question could not be completely answered from Family Survey data. However, some indications were derived. First, the finding that wives who worked before first birth had smaller families than the other employment categories demonstrated the effect of a prior influence on fertility. Second, the elimination of childless women left a group in which the majority had some choice over their family size. The demonstration of family-size differences by patterns of employment in this group suggested that fertility was, at least sometimes, the dependent variable. On the other

TABLE 4.9

PERCENTAGE OF SUBJECTS WITH SPECIFIED NUMBER OF BIRTHS AND MEAN NUMBER BY EMPLOYMENT PATTERN SINCE MARRIAGE AND MARRIAGE COHORT

First Marriage, Wife. Women with Children, only.

Employment Pattern since Marriage	Number of Births: Percentage with: 1	2-3	4-5	6+	Mean	No. of Cases	Marriage Cohort
No Employment	4.5	70.5	15.9	9.1	3.1	44	1927-37
Employed before First Birth	40.0	33.3	20.0	6.7	2.4	15	
Not before First Birth, but Later.	19.0	52.4	23.8	4.8	2.9	42	Births
No Employment	15.6	48.4	31.3	4.7	3.1	64	1937-47
Employed before First Birth	21.9	54.8	19.2	4.1	2.6	73	
Not before First Birth, but Later	15.5	63.4	18.3	2.8	2.7	71	Births
No Employment	12.1	51.5	27.3	9.1	3.2	33	1947-52
Employed before First Birth	10.3	51.7	31.0	6.9	3.2	58	
Not before First Birth, but Later	-	57.1	32.1	10.7	3.6	28	Births
No Employment	3.6	50.0	42.8	3.6	3.5	28	1952-57
Employed before First Birth	6.3	68.7	22.5	2.5	3.0	80	Expected
Not before First Birth, but Later*	-	-	-	-	-	-	Births

Source: Family Survey.

*Category not completed as only 8 women had reached the stage of returning to work after having children.

hand, the finding that a greater percentage of childless women than those with children had been employed at some time during their married lives suggests that family size, in this case the absence of children, affected employment behavior. Undoubtedly, there is a two-way influence between fertility and employment patterns, a factor to be kept in mind in the further analysis of employment patterns and family size in the next chapter.

Urban-Rural Fertility

Urban and rural fertility levels were measured by child-married woman ratios derived from tabulations of age and marital status in census reports from 1881. It will be appreciated that this type of ratio is not a pure measure of fertility, as it is also influenced by infant and early-childhood mortality and the age structure of married women of reproductive age. However, although it has these disadvantages, it was used because it was the only available index and it was important to examine a variable which has been strongly associated with variations in fertility in western societies. The ratio can at least delineate broad trends in fertility. The term, urban, was defined narrowly to refer to the population in cities, together with the settlements that form a socio-geographic unit with them.[5] The population of the rest of New Zealand was defined as rural. This classification, then, dichotomized the urban-rural continuum so as to allow for a comparison of the fertility in the most highly urban units with that in other places. Table 4.10, below, lists the ratios at census dates from 1881.

(See Table 4.10, page 85a)

[5]Age distributions of the population in the four main centers, Auckland, Wellington, Christchurch and Duneain, were the source of the urban ratios in 1881 and 1886. Other areas were added as they reached city size (20,000) until the 1916 Census, when a classification of metropolitan areas was introduced. These were subsequently, and more appropriately, renamed urban areas and provided the urban population for the ratios after 1916.

Table 4.10 shows a decline in both urban and rural fertility ratios between 1881 and 1936, followed by a fluctuating increase to 1966, indicating that both urban and rural fertility contributed to the main directions of the national trend. The size of urban-rural differentials, however, varied over the period. This is largely explained by the tendency of rural fertility rates to be more stable than urban. They decreased more slowly during the national fertility decline in the 1880s and 1890s; they changed less markedly during World War I and the subsequent economic slow-down followed by depression, and did not increase to the same extent after World War II. In fact, a firm decline in the urban-rural fertility differential appears to have begun in the 1950s and, by 1966, it was smaller than at any other date in this table, covering 85 years.

A recent study of trends from 1926, using size of settlement instead of an urban-other dimension as the independent variable, also found a declining association between fertility and type of residential area.[6] Both studies, however, showed that a differential still existed. The Auckland Study also corroborated the finding that changes in the differential occurred through a greater stability in the rural than the urban ratio. It appears that, while both rural and urban fertility rates have changed in accordance with changing social norms and conditions, the rural sector has been the less immediately affected.

A Note on Contraceptive Practices

At several points in this study, it has been stated that contraceptive measures have been used increasingly in New Zealand and that more effective methods are now being used. A limited attempt to assess the

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[6] Elaine M. Hall, Fertility and Size of Settlement in New Zealand 1926-66, Auckland University, 1969, unpublished M.A. thesis.

TABLE 4.10

CHILD-MARRIED WOMAN RATIOS FOR THE URBAN AND THE RURAL POPULATION AT CENSUS DATES FROM 1881. NUMBER OF CHILDREN 0-4 TO 1000 MARRIED WOMEN 15-44 YEARS. NON-MAORI.

Census Dates	Urban	Rural	Total	Index of Difference in Urban and Rural Fertility Levels Urban = 1
1881	1165	1423	1373	1.22
1886	1114	1380	1326	1.24
1891	1037	1350	1257	1.30
1896	936	1236	1145	1.32
1901	843	1151	1050	1.37
1906	842	1102	1010	1.31
1911	814	1043	957	1.28
1916	782	1018	905	1.30
1921	708	937	819	1.32
1926	672	922	789	1.37
1936	549	744	640	1.36
1945	640	841	728	1.31
1951	747	926	822	1.24
1956	729	923	813	1.27
1961	794	962	859	1.21
1966	795	925	843	1.16

Source: Census Reports, Ages and Marital Status.

extent of the increase in contraceptive usage and change in methods was made in the Family Survey.[7] Results of the inquiry are shown in Table 4.11, below.

(See Table 4.11, page 87a)

Three major trends are shown in Table 4.11. First, there has been a continuous increase in the percentage of women using some form of birth control immediately after marriage.

Secondly, there has been an overall increase in proportions using contraceptive methods after their most recent birth. The large percentage of women in the 1947-52 marriage cohort who stated that they used no method of birth control at this stage is somewhat puzzling, but can be partially explained by an overweighting of Roman Catholics in the sample of women from this cohort. Although in the total "contraceptive sample" there were Catholic users of all the contraceptive methods listed, with the exception of vaginal

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[7]Forms asking for details of contraceptive practice were filled in by respondents interviewed by the older women social workers only, so that the "contraceptive sample" was small and non-random. It was distributed as follows:

	Total	1927-37	1937-47	1947-52	1952-62	1962-67
Number of women in Contraceptive Sample	149	14	40	25	37	33
As a percentage of numbers in each marriage cohort in total Family Survey sample	15.8	12.5	16.4	18.0	15.4	23.4

Because of the nature of this sample, trends could not be tested for statistical significance and findings may be regarded as tentative. A particular problem is that proportions of sub-fecund women who did not need to use any form of birth control may have been unevenly distributed amongst the marriage cohorts, in this sample.

creams and intrauterine devices, the percentage who claimed to have used no method after their most recent birth was 52.6 as contrasted with the Protestant percentage of 28.0.

Finally, there has been a decline in the proportion of couples using male methods of contraception. Defining the condom and withdrawal as male methods, vaginal insertions, rhythm and the pill as female, the trend amongst users before first birth was as follows:

	Marriage Cohorts				
	1927-37	1937-47	1947-52	1952-62	1962-67
Percent male methods	100	57.1	54.5	38.1	5.9
Percent female methods	---	42.9	45.5	61.9	94.1
Number of cases	3	14	11	21	17

Although numbers of cases were small, the trend towards the use of female methods was so definite that it can be assumed to be correct. It was well established before the contraceptive pill became generally available in New Zealand in 1962, but the popularity of the pill has accelerated the trend.

Examination of the Family Survey data on contraceptive practices, then, indicated that the use of contraceptive methods had increased and that, as more efficient techniques became available, they were adopted by a large proportion of women.

Summary of Findings

One finding that has emerged very clearly from this analysis is that, regardless of how differentials in average family size amongst population sub-groupings, the trend in each category has followed the same direction

TABLE 4.11

PERCENTAGE OF WOMEN USING CONTRACEPTIVE METHODS AND TYPE OF METHOD, BY MARRIAGE COHORT

A. Methods before First Birth.

Contraceptive Methods	Marriage Cohort				
	1927-37	1937-47	1947-52	1957-62	1962-67
No method used	64.3	57.5	56.0	37.8	33.3
Condom (sheath)	14.3	12.5	16.0	18.9	3.0
Foam Tablets, jelly or cream	-	2.5	8.0	5.4	-
Diaphragm (with or without cream)	-	7.5	12.0	27.0	12.1
Pill	-	-	-	2.7	36.4
I.U.D.	-	-	-	-	-
Rhythm	-	5.0	-	-	-
Withdrawal	7.1	7.5	8.0	2.7	-
Other and combination of methods	14.3	7.5	-	5.4	15.2
Number of Cases	14	40	25	37	33

B. Methods after Most Recent Birth - Women with Children, only.

No method used	53.9	29.7	43.5	11.4	20.0
Condom (sheath)	15.4	18.9	-	8.6	-
Foam Tablets, jelly or cream	7.7	5.4	4.3	2.8	-
Diaphragm (with or without cream)	-	16.2	8.7	8.6	13.3
Pill	-	8.1	8.7	40.0	53.3
I.U.D.	-	-	-	2.8	-
Rhythm	-	-	4.3	2.8	6.7
Withdrawal	-	8.1	8.7	8.6	6.7
Other and combination of methods	23.0	13.5	21.7	14.3	-
Number of Cases	13	37	23	35	18

Source: Family Survey.

as that in the total population. It is apparent that the marital fertility of all the social sub-groupings has been influenced by changing social conditions and their associated norms on a societal scale. These have had a stronger or more rapid effect on the family-size norms and/or the reproductive practices of some sections of the population than others, producing the changing pattern of family-size differentials which has been described.

Turning to the variables associated with family-size variations, a trend demonstrated in the Family Survey was a continuing decline in average family size from the marriage cohort of 1898-1902 to that of 1927-32, followed by a slow recovery reaching a peak with the cohort 1947-52. The three most recent five-year cohorts expected slightly smaller families, on the average, than the 1947-52 cohort, but expectations differed little amongst the three. This trend, shown for Wellington families, was almost identical with the national, over the periods for which the latter has been documented.

A strong inverse association between age at marriage and average family size was beginning to decline amongst the marriage cohorts of the 1940s. Significant differences in average numbers of births achieved or expected disappeared amongst those married at ages under 30 years in the 1950s, and the only differential remaining was that between this group and those who had married at 30 years or older.

An inverse correlation between socio-economic status and average family size was demonstrated for women marrying around 1900. The differential increased as the families of the higher-status groups decreased more rapidly than those of the lower-status during the first decade of this century, then began to contract, and eventually disappeared with the marriages of the late 1930s. A tendency for families of the highest and lowest status groups to be larger than those of middle status was observed

for a recent period, but differences were slight.

Religious factors have had a more significant influence on fertility than any other variable examined, with the possible exception of urban-rural residence. Throughout the period of study, Roman Catholics have had a larger average family size than Protestants. However, there were some indications of a decline in the differential. Amongst Catholics, those who attended church regularly had larger families than others, on the average, and a slighter effect in the same direction was shown amongst the Protestants in the 1922-52 marriage period. Families in marriages where both partners were Roman Catholic were considerably larger, on the average, than those in Protestant and mixed Protestant-Catholic marriages.

Employment of a wife after marriage was associated with a smaller-than-average family size. The degree to which employment was selective of women with smaller families could not be demonstrated. There were, however, indications that employment was sometimes a determinative influence on family size.

There has been a continuing differential in urban-rural fertility which showed no signs of beginning a substantial decline until the late 1950s. There was no evidence, however, to suggest that urban residents brought up in country areas had, or expected, a larger family, on the average, than those with urban backgrounds. Those who had spent their childhood in countries other than New Zealand had somewhat smaller average family sizes than those with a New Zealand background, at least up to the marriages of the 1950s.

Present family-size norms were positively related to the average achieved and expected family sizes of all sub-groupings, except that of age at marriage. Here it appeared that a substantial proportion of the women who had married young had had more births than they considered ideal

and, conversely, a large proportion of those who had married late had had, or expected to have, fewer children than they thought desirable.

Overall, it appeared that there had been a significant decrease in family-size differentials by social sub-grouping over the century and that the great majority of New Zealand women had come to want to have families of between two and four children.

The next chapter will compare these findings on trends in family-size differentials in New Zealand with those found in some research overseas.

CHAPTER V

FAMILY SIZE: A COMPARISON OF DIFFERENTIALS IN SELECTED COUNTRIES

Trends in family-size differentials are closely linked to the structure of a society and its changes. This chapter explores the ways in which the characteristics of the major social sub-groupings which make up the New Zealand population, and their changing degrees of distinctiveness in values, resources and conditions of life, have influenced trends in family-size distribution. The inquiry is carried out through a comparison of the group structure and fertility differentials in New Zealand with those in some other societies, with a view to establishing patterns of linkages between the two variables and so helping to explain the New Zealand trends.

For the comparison, it was important to choose societies at relatively similar stages of socio-economic development, as the gross differences in patterns of fertility differentials found between economically underdeveloped, developing and advanced societies would have obscured any attempts to link fertility variations to group structure in a meaningful way, were societies at different stages of economic development included. This conclusion is supported by a theory based on the stages of demographic transition, which was recently advanced by a group of demographers in an attempt to explain changes over time in the patterns of economic differentials in fertility. The theory stated, in part, that at the beginning of the transition from high to low fertility, an inverse relation between

economic status and fertility would be found. This would be followed by a U-shaped correlation as fertility further declined, and by a direct relationship between economic status and fertility when low fertility rates were achieved.[1] If this theory is correct, the arguments on which it is based can be used to explain historical trends in differentials by economic status in New Zealand, but further explanation must be found for changes which have occurred since New Zealand has completed the demographic transition. This further explanation, then, is sought through the comparison of New Zealand trends with those in some other societies which have also achieved low mortality and fertility rates--the United States, Great Britain and Australia. Comparisons are made according to the social sub-groupings for which trends were outlined in Chapter IV, as far as comparable research studies were available.

Age at Marriage

In Great Britain and in the United States, as in New Zealand, those who married at younger ages have tended to have more children than those married later. However, this tendency has been weakening.

In Great Britain, Glass and Grebenik compared the differences in the average number of births of the 1900-09 and the 1925 marriage cohorts by age group at marriage.[2] They found that the relative influence of age at marriage did not change over this period when averages to all women were used in the comparison. When fertile marriages only were included, however,

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[1]Cho Lee-Jay, Wilson H. Grabill, and Donald J. Bogue, Differential Current Fertility in the United States (Chicago: Community and Family Study Center, University of Chicago, 1970), pp. 282-85.

[2]D. V. Glass and E. Grebenik, The Trend and Pattern of Fertility in Great Britain. A Report on the Family Census of 1946. Papers of the Royal Commission on Population, VI (London: H.M.S.O., 1954), p. 4.

it appeared that marriage age and family size were not as closely linked in the more recent cohort, a development that the authors attributed to the spread of family planning. A study of the 1930-60 marriage cohorts in England and Wales showed that the differentials continued to decline over this period, but they did not completely disappear.[3]

In the United States, a strong inverse correlation between age at marriage and family size was shown in a distribution of women 35-44 years old in 1960.[4] A decline in the differential from this time was projected in a tabulation of birth expectations by age at marriage in a Growth of American Families study.[5]

The findings in Great Britain and the U.S.A. were similar, then, to those found for a New Zealand urban population. The explanation of the association between younger marriage and a larger average family size is undoubtedly the longer period for which wives are at risk for a pregnancy in these marriages than in those where the bride was older. No real evidence has been found to suggest that women marrying at younger ages prefer larger families than those marrying at later ages. In fact, in New Zealand, a tendency towards the reverse was found. Findings on this question in the United States have varied slightly. One study reported a weak negative association between number of children desired and age at marriage,[6] a finding matching that of

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[3]D. V. Glass, "Fertility Trends in Europe since the Second World War," Population Studies 22, No. 1 (March 1968): 118.

[4]Kiser, Grabill, and Campbell, p. 118.

[5]Pascal K. Whelpton, Arthur A. Campbell, and John E. Patterson, Fertility and Family Planning in the United States (Princeton: Princeton University Press, 1966), p. 76.

[6]Charles F. Westoff, Robert G. Potter, and Philip C. Sagi, The Third Child (Princeton: Princeton University Press, 1963), Chapter XLV.

the Family Survey, another found no association,[7] and a third reported a slightly positive association.[8] In the face of this weak and inconsistent evidence, it is difficult to believe that differences in family-size norms are strongly associated with variations in age at marriage.

In summary, in the three countries for which trends were outlined, family-size differentials by age at marriage have persisted over the century. They have, however, been decreasing and the decrease should continue as family planning becomes increasingly widespread and effective.

Urban-Rural Differentials

"Within the more developed areas, there now appears to be a narrowing of previously wide fertility differentials by urban-rural residence . . . ."[9]

In England and Wales, the 1961 Census results showed a virtual disappearance of the difference for a cohort of women with marriage duration 15-19 years, the rural to urban ratio being 1.04 to 1.00.[10] A marked decline in the differential has also taken place in the United States.[11] In Australia, urban-rural differences have been diminishing, but as Lincoln Day demonstrated for the most recent birth cohort in his study, that of 1920-21, they were still larger than differentials by Catholic-Protestant denominational adherence, an order reversed in the United States.[12] It is difficult to make

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[7]Whelpton, Campbell, and Patterson, p. 65.

[8]C. Westoff, P. Sagi, and E. Lowell Kelly, "Fertility Through Twenty Years of Marriage," American Sociological Review 23, No. 5 (October 1958): 549-556.

[9]Kiser, Grabill, and Campbell, p. 5.

[10]Glass, p. 119.

[11]Kiser, Grabill, and Campbell, pp. 74-80; Whelpton, Campbell, and Patterson, pp. 115-120.

[12]"Family Size and Fertility," in Australian Society, 2d. ed., ed. A. F. Davies and S. Encel (Melbourne: Cheshire, 1970), pp. 16-30.

precise comparisons of findings on the New Zealand trend, measured by cross-sectional child-married woman ratios with those of the above cohort studies. However, with no evidence of a consistent decline in the differential before the 1961 Census when there was a larger rural-urban difference than that found in England and Wales on a cohort basis, it appears that the New Zealand trend has been more like the Australian than either the English or American. In Australia and New Zealand, a sizable differential has persisted for longer.

To try to understand why this has occurred in New Zealand, it is worth examining the decline in the differential in the United States where it has been investigated in more detail. The Growth of American Families Studies showed a decline in the differential between their interviews in 1955 and 1960 and a potential further decrease.[13] The decline was more strongly associated with changes in the fertility attitudes and behavior of rural non-farm than rural farm wives. The latter still had higher family-size ideals and expected more children, on the average, than urban dwellers and, additionally, they were not as successful in controlling fertility. Rural non-farm wives had moved very close to urban in all respects. A probable explanation is that additional children could still be absorbed more easily into farm than other families, differentiating both fertility levels and birth-control practices by type of residence. The same would be true in New Zealand; and there, the greater proportion of the population living on farms would contribute towards sustaining the rural-urban differential at a higher level than that in the United States.

An economic explanation of the difference lies in the maintenance of full employment in New Zealand from 1939-66, in contrast to an unemployment ratio ranging around four to five per cent in the United States.[14] While

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[13] Whelpton, Patterson, and Campbell, pp. 115-120 and p. 266.

[14] U.S. Bureau of the Census. Statistical Abstract of the United States: 1969 (Washington, D.C.: 1969), p. 211.

employment opportunities in rural areas were decreasing in both countries, urban employment was practically assured in New Zealand in contrast to the United States. Consequently, New Zealand country dwellers were less likely, than American, to anticipate employment problems which could have acted as a deterrent to their having moderately large families. This argument subscribes to the theory that one of the reasons that rural dwellers have been able to sustain a relatively high rate of natural increase in industrializing countries, has been the feasibility of rural-urban migration.[15] Although the rural-urban fertility differential is now decreasing in New Zealand, the economic conditions described could well have helped to prevent it from contracting as far or as rapidly as that in Britain or the United States over the past thirty years.

It is likely that higher family-size norms amongst New Zealand rural dwellers have had a stronger influence on their average family size than lesser ability to control fertility. This is supported by the finding that urban residents who had spent at least their childhood in country areas did not have larger families than those with an urban background, which suggests not only the adoption of norms appropriate to a changed type of community, but also the ability to actualize these as successfully as their neighbors of urban origin. This finding will be discussed in more detail in the following section.

Childhood Residence

An interesting contrast to the New Zealand pattern was the wide fertility differential in the United States between the urban dwellers who grew up on farms and those brought up in urban surroundings. As Duncan has

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[15]Kingsley Davis, "The Theory of Change and Response in Modern Demographic History," Population Index XXLX, No. 4 (October 1963): 354-57.

stated: "Recent studies have suggested that within the non-farm population, the classic pattern of differential fertility [by socio-economic status] is confined to couples in which one or both spouses grew up on the farm."[16] Using a sample of 6000 women, 42-61 years old, abstracted from Current Population Survey data for 1962, Duncan found the largest family sizes amongst those with present farm residence, followed by those where husband and wife had farm backgrounds, those marriages where only one spouse had a farm background, and, finally, those where neither spouse was from a farm. When the sample was further subdivided by educational attainment, as an index of socio-economic status, it appeared that this variable was inversely related to fertility amongst those of farm background, but had little association with fertility amongst those raised in urban surroundings, so that the inverse association between fertility and status in the population as a whole could be largely attributed to the residence variable.

There is a suggestion in another study, however, that the effect was largely due to the fertility patterns of those who had lived on farms at least some time after their marriage and that early farm residence by itself did not tend to differentiate the fertility of those brought up in rural or urban places.[17]

The above pattern was not shown in the New Zealand findings. Whether controlled for socio-economic status or not, no family-size differentials

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[16]Otis Dudley Duncan, "Farm Background and Differential Fertility," Demography 2 (1965): 240. Other studies reporting similar findings are: David Goldberg, "Fertility of Two-Generation Urbanites," Population Studies 12 (March 1959): 214-22; and Ronald Freedman and Doris P. Slesinger, "Fertility Differentials for the Indigenous Non-Farm Population of the United States," Population Studies 15 (November 1961): 161-73.

[17]Whelpton, Campbell, and Patterson, p. 121.

were found by urban-rural background.[18] The different findings for the United States and New Zealand undoubtedly reflect the fact that the transition from country to city living has not been as extreme for New Zealanders as it has for many rural groups in the United States, enabling a more rapid adaptation to urban norms and practices amongst the New Zealand rural-urban migrants. The more rapid adaptation in New Zealand has been facilitated by a greater similarity of town and country dwellers on the one hand, and by the virtual absence of cities as large and complex as the major cities in the United States, on the other. The first point needs some elaboration.

The relatively great social diversity in the American population, not only in rural but also in city areas, should be noted. Ethnicity, often reinforced by religious denomination and cross-cut by social class and region and type of settlement, divides a large proportion of the population into sub-cultures with distinctive patterns of norms and with varying amounts of access to material and non-material resources. This is not to deny the existence of pressures towards uniformity, pressures which, however, operate most effectively where groups are neither geographically isolated nor have limited access to a full range of social and economic opportunities. As has been suggested, the family-size differential between rural-urban migrants and those of urban origin in the United States has been maintained through the higher fertility of former rural residents of lower socio-economic status, which variable is, in turn, positively correlated with geographic isolation and sub-cultural variation. Both geographic and socio-cultural conditions are quite different in New Zealand which has had practically no country areas so isolated by distance, natural boundaries or developed sub-cultures that

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[18] The childhood residence variable used did not divide people by residential history after the age of 14 years. However, there were undoubtedly some in the rural childhood sample who had lived on farms at some time since marriage.

members of such communities, drawn to urban areas for economic or other reasons, could not adapt to urban norms and practices within a fairly short space of time.[19] Social similarities between town and country have been fostered by national uniformities in laws and services. For example, New Zealand has had throughout the century a centrally planned, administered and financed education system and statutory regulations on the minimum school-leaving age which have ensured greater comparability in the educational attainment of rural and urban children than is the case in the United States. Again, frequency of contact between town and country residents in New Zealand has encouraged mutual understanding and a basis for developing like norms in like conditions. A high rate of rural-urban migration, particularly amongst the young and the old, has led to frequent exchange of visits between town and country, visits facilitated by the relatively short distances of travel involved. An administrative process encouraging contact is the transfer of public servants, who comprise a high proportion of the work force in a country where so many activities and services are administered by the State, between city and country areas. A period of work in a small town or rural area may be a requirement of promotion, a specific example being the requirement of a two-year period of "country service" for school teachers which has led not only to an exchange of ideas between town and country, but also to a substantial number of marriages between farmers and teachers with an urban background. Marriage between those with urban and rural backgrounds is also common in the cities; of the respondents in the family survey who had spent at least their childhood in rural areas, only 28 percent had married others with rural backgrounds, so that the vast majority had married people brought up in urban places.

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[19] It is true that this set of conditions has applied to certain groups of rural Maoris, but this is not relevant to the present study.

It is clear that similarities in conditions and a high level of communication between urban and rural dwellers in New Zealand have led to a minimization of social differences between the groups and the lack of a family-size differential between urban-rural migrants and those brought up in cities is one manifestation of this.

Socio-Economic Status

Whether measured by occupation, education, income or a combination of these variables, declines in fertility differentials by occupational status have been shown in most economically developed countries in recent years.

Examining the trend by occupational status, the pattern in New Zealand appears to have been similar to that in Great Britain over the period of rapid fertility decline in the early twentieth century. Fertility rates fell in all status groupings, but more rapidly in the upper, thus increasing family-size differentials. While these were sustained at about the same level in Great Britain until at least the time that the 1925 marriage cohort had completed its childbearing, Family Survey data suggest that they were already beginning to decline in New Zealand with the 1918-27 marriage cohort and that the former inverse correlation between fertility and occupational status had disappeared with the marriages of the late 1930s. In contrast, an inverse correlation continued in England and Wales to marriage cohort 1946-51. Recently, in both countries, the smallest families have tended to be found in the middle status range and the larger families amongst the higher and lower occupational groupings.[20] However, there are signs that in New Zealand any correlation between occupational status and family size is

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[20]Studies in Great Britain: Glass and Grebenik, pp. 4-5 and p. 113; Wrigley, pp. 185-89; Glass, pp. 119-20.

about to disappear completely.

Fertility differentials by occupational status increased in the United States also in the early twentieth century.[21] Since that time, there has been a substantial decline in differentials and a U-shaped correlation is just beginning to emerge. Some idea of the relative differences was shown by an age-standardized analysis of Current Population Survey data for 1964, which measured number of children ever born to 1000 married women 15-64 years of age and living with husband. The range was from 2154 births for wives of clerical and kindred workers and 2176 for those of professional, technical and kindred, to 3320 for wives of skilled laborers.[22]

The trend in Australia over the fertility period of birth cohorts 1905-09 to 1920-21, broadly equivalent to Marriage Period 1922-52 in the New Zealand study, showed a change from an inverse to a U-shaped correlation between fertility and occupational ranking.[23]

Before discussing differences in the New Zealand trend from those outlined for other countries, it should be noted that all the countries appear to be following the stages of the Theory of Differential Fertility, as described at the beginning of the chapter. All experienced an increase in the differential as family size began to decline more rapidly amongst those of higher, than lower, socio-economic status during the transition from high to low fertility rates. A U-shaped correlation succeeded this stage in some of the countries and has shown signs of succeeding it in the others. The final stage, a direct relationship between economic status and fertility, does

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[21]Wilson H. Grabill, Clyde V. Kiser, and Pascal K. Whelpton, The Fertility of American Women (New York: John Wiley & Sons, 1958), pp. 180-82.

[22]Kiser, Grabill, and Campbell, p. 185.

[23]Lincoln Day, p. 20.

not appear to have been reached, at least as yet, by any of the societies under consideration. New Zealand is the only country which has demonstrably passed the stage where fertility is lowest in the middle-status group, and what appears to be emerging is an absence of an association between status and fertility rather than a direct correlation.

It would be implausible to argue that the varying lengths of time spent at each stage, amongst the societies represented, were closely linked to the rate at which they had completed the stages of demographic transition. For example, the United States had certainly completed the demographic transition as soon as New Zealand, which, however, has passed more rapidly through the stages of differential fertility by economic status. Amongst industrialized societies, the differences in the patterns of these differentials are more closely linked to variations in social structure or, more precisely, to varying degrees of group diversity in values, interests and conditions, as will now be explored.

Over the last fifty years, the New Zealand trend appears to have been nearer to the Australian than to those in Great Britain and the United States. An inverse correlation between fertility and occupational status has persisted until very recently in Britain and is still found in the United States.[24] In these countries, occupational strata are more distinctly linked with different sets of attitudes, opportunities and interests than is the case in Australia and New Zealand. This is not to say that status differences have completely disappeared in the latter countries, and in New Zealand, at least, they still

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[24]Although the recent differential in the United States has been attributed mainly to the effect of status rankings in one section of the population, urban in-migrants from rural areas, this is still an occupational status differential. The weakening of the association between occupational status and fertility variations amongst those of urban origin helps to explain the reduction in the overall differential.

influence certain aspects of family formation, as illustrated by a persistent tendency for marriage to take place between people of similar socio-economic status.[25] The choice of a marriage partner, however, is undoubtedly the last aspect to be influenced by a weakening of traditional social status rankings. Certainly, socio-economic status did not explain much of the recent variation in any aspect of family formation examined in the present study.

Some of the reasons for the relative absence of clear social status rankings in New Zealand were outlined in Chapter I. New Zealanders have progressively achieved a considerable measure of social and economic equality and opportunity, which has led to a blurring of the lines between the various occupational groupings, for example, through the promotion of a high rate of occupational mobility.[26] It has also produced a comparatively clear visibility between strata, through social practices such as majority attendance at public schools, inexpensive university education, a relative lack of residential segregation and free use of natural recreation areas, practices which have tended to diffuse attitudes and interests and to extend opportunities amongst occupational strata. These influences have been reinforced by the narrower

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[25]Miriam Gilson, "The Changing New Zealand Family: A Demographic Analysis," in Marriage and the Family in New Zealand, ed. Stewart Houston (Wellington: Sweet & Maxwell, 1970), pp. 42-45.

[26]Little assessment of the actual rate of occupational mobility has been undertaken. However, a study carried out on 1957 survey data for Rotorua found a higher rate there, than found in two United States samples; Natalie Rogoff, "Recent Trends in Urban Occupational Mobility," in Cities and Society, eds. Paul K. Hatt and Albert J. Reiss (New York: Free Press, 1957), pp. 532-35; and a calculation from data in: National Opinion Center, "Jobs and Occupations: A Popular Evaluation," in Class, Status and Power, eds. Reinhard Bendix and Seymour M. Lipset (London: Routledge and Kegan Paul, 1954), pp. 424-25. The New Zealand study was: J. H. Robb and Jonathan Cloud, "Occupational Mobility in a New Zealand Provincial Borough," The Australian and New Zealand Journal of Sociology 6, No. 1 (April 1970): 49-51.

span of the income range in New Zealand than in a society like the United States.[27] In the circumstances it would be expected that behavioral differences by social strata would be less extreme in New Zealand than in countries like Britain and the United States. An analysis of recent differentials by occupation in the United States illustrates the point for fertility behavior.[28] The wives of lower blue-collar workers not only had larger family-size ideals than white-collar, and expected more births, but also a somewhat larger proportion had more births than they wanted. There were, in effect, still slight differences in family-size norms and also in the ability to put them into practice. Neither of these differences was shown in the recent New Zealand data. The differences between the United States and the New Zealand trend should not, however, be over-emphasized. Fertility differentials by socio-economic status have decreased sharply in the United States and many demographers believe that they will soon disappear.

Religious Denomination and Church Attendance

In the types of societies being compared, affiliation with the Roman Catholic denomination has been associated with the achievement of somewhat larger average family sizes than those of Protestants. For example, differentials found in an Australian study of number of births to birth cohorts 1875-79 to 1920-21 closely paralleled those found in New Zealand over the same period.[29] There was a decline in the Australian differential from about

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[27]Cora Vellekoop, "Social Strata in New Zealand," in Social Process in New Zealand, ed. John Forster (Auckland: Longman Paul, 1969), p. 238.

[28]Whelpton, Campbell, and Patterson, pp. 114-115.

[29]Lincoln H. Day, p. 20. The birth cohorts 1875-79 and 1920-27 in the Australian study could be translated approximately as the 1898-1903 and 1942-47 marriage cohorts in the New Zealand study.

the time when those born in the last century completed their families, and the last three cohorts studied showed an average difference of 0.5 births. Studies of recent periods have shown that Protestant-Catholic differentials still exist also in the United States, Canada, and Great Britain. Some inter-societal differences, however, have been found. In most countries, the differential has shown signs of a decrease, whereas in the United States several studies have found evidence of a widening in Catholic-non-Catholic differentials.[30]

There has been no completely satisfactory explanation of the change in trend in the individual countries. In the United States, the increase in differential has been tentatively linked with economic variations. At a within-group level, increasing numbers of births have been achieved and are expected by Catholics of higher, rather than lower, socio-economic status.[31] At a societal level, it has been suggested that "it is possible that the generally rising economic level of the country has enabled Catholics to achieve, for the first time, a high fertility potential which may have been constrained in earlier periods."[32] Research has also been directed towards the part played by strength of religious adherence measured by education at parochial schools and frequency of church attendance, for example, and the effect of ethnic group membership on family-size variations amongst Roman Catholics. Although strong within-group differences have been demonstrated,

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[30]A summary of the results of these studies is found in Kiser, Grabill, and Campbell, p. 234.

[31]For example, C. Westoff, R. Potter, and P. Sagi, The Third Child (Princeton: Princeton University Press, 1963), Chapter 9; and Whelpton, Campbell, and Patterson, p. 94.

[32]David Goldberg, "Fertility and Fertility Differentials," in Public Health and Population Change, ed. Mendel C. Sheps and Jeanne C. Ridley (Pittsburgh: University of Pittsburgh Press, 1965), p. 137.

according to these variables, their effect on the increase in Protestant-Catholic family-size differentials has not been satisfactorily assessed.

For Canada, the process by which Catholic fertility has decreased has been explained on the demographic level.[33] Burch demonstrated that, through a combination of later marriage, widespread non-marriage and lower marital fertility, French Canadians, the major influence on the fertility patterns of Canadian Catholics, were achieving a level of fertility approximating that of the Anglo-Protestants. However, the only social explanation of their marriage and fertility behavior offered was that it was a culturally distinctive response to life in twentieth-century North America.

The family-survey sample of Roman Catholics was too small to offer much explanation of a change in differentials. However, the unexpected finding that Protestant-Catholic marriages had produced slightly smaller families, on the average, than Protestant in the 1922-52 Marriage Period, and that women in mixed marriages expected to have significantly smaller families in Marriage Period 1952-67, offered one lead to explanation. It had been assumed that the average family size in mixed marriages would be intermediate between that of Protestants and Catholics, representing the dominant values of sometimes the Protestant and sometimes the Catholic spouse. At the extreme, it was thought that Protestant and mixed marriages would produce families of similar size, as was found in a Growth of American Families study.[34] Granted that the sample of mixed marriages in the Wellington Survey was small, and that the large proportion of wives expecting fewer than two children may have resulted from an over-weighting of sub-fecund women in the 1952-67 Marriage

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[33]Thomas K. Burch, "The Fertility of North American Catholics: A Comparative Review," Demography 3, No. 1 (1966): 176-87.

[34]Whelpton, Campbell, and Patterson, p. 71.

Period, the finding of a significant difference in the birth expectations of Protestant and mixed marriages suggests hypotheses which could be tested. It is possible, for instance, that some partners of mixed marriages may consciously reject Catholic fertility values to the extent that they rigorously restrict family size. It is also possible that many insist on using the more efficient methods of birth control. On firmer ground it appears that an increase in mixed Protestant-Catholic marriages in New Zealand has been partly responsible for a decrease in the Catholic and Protestant differential in average birth expectations. The family survey showed the increase as follows: amongst marriages between 1927 and 1952 which had at least one Roman Catholic partner, 45 percent were Protestant-Catholic marriages. This figure increased to 51 percent of the marriages in the 1952-67 Marriage Period.

The finding that the Protestant-Catholic differential resulted from the larger average family size of Catholics who attended church regularly is not unique to New Zealand. Within-group differentials have been found by strength of religious association in several countries. One study which subdivided all other social variables by denominational affiliation reported:

> All of our research into the nature of the influence of Catholicism on fertility has indicated that the relationship is largely reducible to the extent of conformity to formal church requirements and exposure to the Catholic value system in the form of education in religious schools. In short, there is a way in which Catholicism can be viewed as a variable ranging from high to low with fertility as a direct linear function--a model which does not have an analogue in the case of Judaism and Protestantism.[35]

As this was a study of the fertility behavior of a sample of women between 1957 and 1960, it gave no basis for evaluating whether fertility had been positively correlated with strength of religious association amongst Protestants in past periods. The family survey showed that this had been

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[35]Westoff, Potter, and Sagi, p. 81.

the case in New Zealand, although the link was not as strong for Protestants as for Catholics. Since the early 1950s, the position in New Zealand appears to have been similar to that described in the above quotation from the Princeton report.

Catholic-Protestant differentials in average family size have been described for several countries. It remains to discuss whether these were supported by different family-size norms, as was found in the New Zealand study. Research has confirmed that this has also been the case in the United States and Great Britain. In an analysis of findings on opinions of ideal family size in eight American surveys conducted between 1943 and 1961, Judith Blake demonstrated that the Catholic averages were consistently higher than non-Catholic, but that the differences typically amounted to half a child or less.[36] She stressed that the majority of Catholic, as well as non-Catholic, women gave an ideal number within the two-to-four child range. A recent study in Great Britain found that the Catholic average ideal was larger than non-Catholic by 0.5 births, a difference identical to that found in the family survey.[37] It is worth noting that, although the differentials found in the three countries were remarkably similar, average family-size ideals differed, those of Great Britain being smaller than those of the United States and New Zealand, even though the latter was for an urban sample.[38]

It is apparent that a differential in the average family sizes of

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[36]"The Americanization of Catholic Reproductive Ideals," Population Studies 20, No. 1 (July 1966): 27-43.

[37]Ru-Chi Chow and Susannah Brown, "A Comparison of the Size of Families of Roman Catholics and Non-Catholics in Great Britain," Population Studies 22, No. 1 (March 1968): 51-60.

[38]Great Britain, 2.6 non-Catholic, 3.1 Catholic for women aged 16-30 years; United States, 3.2 to 3.4 and 3.6 to 4.3, respectively; New Zealand, 3.1 and 3.6.

Catholics and non-Catholics has persisted, and that it has derived at least partly from differences in family-size norms.[39] How far the higher Catholic norms stem from individual acceptance of church teachings, and how far they can be explained socially through the crystallization of norms of family size and birth control within sub-communities, varies over time and place. However, both influences can usually be detected. An analysis such as Judith Blake's would suggest that Catholic opinions on ideal family size were closer to those of Americans in general than to those which would result from close adherence to church teachings. This would imply that Catholic norms result from a modification of the church position in the light of general community values. A similar implication can be drawn from a comparison of absolute differences in Catholic family-size ideals in different societies. Although there are some differences in interpretation of Catholic doctrine, wide deviations are not encouraged, and so the lower family-size norms of Catholics found in Britain, as compared to the United States and New Zealand, matching the differences in national norms, suggest that Catholics are considerably influenced by the norms and practices prevailing in their own societies.

The Employment of Married Women

> Female labor force participation has long been known to be one of the most impressive relationships to family size of any variable--typically in Western countries it has been equalled or exceeded in strength only by Catholic and non-Catholic religious affiliation.[40]

For this century, and in aggregate form, this statement is undoubtedly correct. A negative relationship between the labor force participation of

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[39]There is also documentation of the fact that it has arisen partly from the use of less efficient contraceptive methods and usage. For example, Whelpton, Campbell, and Patterson, pp. 278-280.

[40]Judith Blake, "Demographic Science and Population Policy," in Sheps and Ridley, eds., p. 63.

married women and family size has been found by recent studies in most developed societies.[41] Further, it is one of the few family-size differentials that has shown little evidence of diminishing.

The nature of the link between employment of wives and variations in family size is both more complex and less well understood than any of the other social variables considered. There is little doubt that paid employment is used as an alternative activity by wives who cannot have children or as many as they would like. There is also little doubt that some wives restrict their family size in order to be able to keep or seek employment.[42] Both groups contribute to the negative correlation found between employment and family size, but their relative importance varies. Research interest has been strongly focused on the relationship between work motivation and fertility values. For example, attempts have been made to ascertain this relationship amongst girls who have not yet entered employment, to determine whether those with strong work orientations would be likely to have small families, regardless of their work history after marriage. This appears to be a strong probability. Other studies have been directed towards isolating the conditions under which working wives would restrict numbers of births most rigorously. For instance, there is the question of how far the existence of facilities, such as good, easily accessible day care for children, would encourage working wives to have more children, as opposed to encouraging more

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[41] Selected examples: Glass, p. 20 and p. 27; Kiser, Grabill, and Campbell, pp. 219-224; Gwendolyn Z. Johnson, "Differential Fertility in European Countries," in Demographic and Economic Change in Developed Countries (Princeton: Princeton University Press, 1960), p. 61.

[42] For example, see: Whelpton, Campbell, and Patterson, pp. 107-112; Ronald Freedman, Gerhart Baumert, and Martin Bolte, "Expected Family Size and Family Values in West Germany," Population Studies 13 (1959/60): 136-50.

wives to enter the labor force and to restrict their family size because of the competing activity. A study which provided a partial answer to this question was an inquiry into the relationship between female employment and fertility in Turkey, in which it was demonstrated that the lack of an association between the two was largely due to the availability of relatives to care for children of working mothers, a finding which suggests that generous provision of childcare facilities may not act as a deterrent to fertility.[43] These sorts of studies have often been carried out to provide a basis for national manipulation of fertility trends, through altering the conditions under which married women are employed. However, the effects of such manipulations would be limited--general socio-economic conditions have a stronger influence on the fertility of both working women and housewives. Consequently, it is possible for women's work participation to increase with prosperity and greater employment opportunities and average family size to increase also, as happened in many countries, including New Zealand and the United States, after World War II.

As suggested by the above discussion, the various relationships between female employment and family size are not yet completely understood. The family survey data provided little basis for untangling the complexities. However, a strong inverse association between employment and family size was shown, as measured by number of years worked and work pattern since marriage. Further, indirect evidence indicated that the association arose, at least partly, from voluntary restriction of births. Differentials found in birth expectations indicated that it was probable that the inverse association would continue over the fertility periods of those already married. The size

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[43] J. Mayone Stycos and Robert H. Weller, "Female Working Roles and Fertility," Demography 4, No. 1 (1967): 210-17.

of the differential could not, however, be forecast in view of the very incomplete understanding of the relationship between employment and fertility. It will undoubtedly be influenced by the general level of employment in New Zealand and, within this, by the availability of jobs for married women. It could also be influenced, though less dramatically, by an increase or otherwise in services designed to facilitate employment, such as acceptable, inexpensive and accessible childcare services.[44] A final suggestion, derived from family-survey findings, is that with employment before first birth becoming an almost universal pattern, at least in the cities, this practice may not be associated with significantly smaller family sizes in New Zealand, in the future.

The comparisons in this chapter have demonstrated that New Zealand trends in family-size differentials, according to selected social subgroupings, have been similar in direction to those in some other countries at a comparable level of economic development. Over the century, declines in most differentials have occurred. It appears that the main way in which the New Zealand trends have differed from those in the United States and Great Britain is that declines have tended to take place earlier and more rapidly, reflecting a population of less social diversity, partly consequent on the existence of social and geographic conditions favorable to a relatively rapid diffusion of norms and practices. The only differential that has declined more slowly in New Zealand is that by urban-rural residence, apparently a consequence of higher rural family-size norms, together with less need to restrict family size.

For a study of changing family structure in New Zealand, the most

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[44]Miriam Gilson, "Women in Employment," in John Forster, ed., 192-96.

important points to be noted are that, in New Zealand, few differences are now to be found between the average family sizes of social subgroupings and that, although a similar trend has occurred in other economically developed countries, it has reached a more advanced stage in New Zealand than in most.

CHAPTER VI

BIRTH TIMING AND SPACING AND A NOTE ON HOUSEHOLD UNITS

Birth Timing and Spacing

The timing of the first birth after marriage and the subsequent spacing of children have many consequences for the roles and relationships within the family circle and in the wider society. Initially, the type of relationship between husband and wife at the birth of their first child and their adaptation to their new status as parents are likely to be affected by the length of time they have been married before they have a child. Subsequently, the family will differ as a social group according to whether children are widely or closely spaced. For many years in the life of a nuclear family group, the relative gaps in the ages of the members partly determine family activities, types of relationships and the way that roles are allocated within the family circle. These patterns, in turn, influence the development of individual children, their personality, intelligence, and even sexual identity.[1]

Turning to the influence of birth timing and spacing on the participation of family members in the wider society, it appears to be the role

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[1]For example: Anne Anastasi, "Intelligence and Family Size," Psychological Bulletin 53 (May 1956): 187-209; Fred L. Strodtbeck and Paul G. Creelan, "The Interaction Linkage between Family Size and Sex-Role Identity," in Family and Fertility, ed. William T. Lin (Notre Dame and London: University of Notre Dame Press, 1967), pp. 113-129; James H. S. Bossard and Eleanor S. Boll, The Large Family System (Philadelphia: University of Pennsylvania Press, 1956).

of the wife which is most significantly affected. The timing of the first birth after marriage has a determinative influence on her potential employment at this stage in a society like New Zealand where continuous employment in the period surrounding childbirth is still uncommon. It also influences other activities and choice of acquaintances. Birth spacing partly determines later employment opportunities and other types of participation in the wider society.

From a societal perspective, the predominant patterns of birth timing and spacing and changes in these patterns affect many aspects of social and economic life and, together with average marriage age and family size, are the major determinative influence on the growth rate of the population.

In searching for explanations of trends in birth timing and spacing, it is important to remember that these aspects of family formation are not yet completely under the control of married couples. Sagi and Westoff were earlier reported as claiming that perhaps half of the variance in family size occurred, unintentionally, through such factors as fecundity variations, pregnancy wastage and chance variations in the occurrence of a conception, and these factors play an even greater part in determining patterns of timing and spacing.[2] However, a greater degree of control has gradually been achieved, particularly in the prevention of births. As with marriage age and family size, wherever the spacing of children is a matter of choice, preferences are influenced by socio-economic conditions and by current social norms. Unfavorable socio-economic conditions, for example, may lead to a delaying of births or, again, conditions of economic expansion, accompanied by increased employment opportunities for married

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[2]Sagi and Westoff, pp. 130-40.

women, may influence the spacing of births to allow greater advantage to be taken of the economic possibilities. Changes in opinions on what constitutes optimal timing and spacing may be associated with changes in socio-economic conditions or may be derived from other sources such as the popularization of findings on child development which specify, for example, the age-spacing which will best contribute to the development of each child or the range of ages at which parents can best share activities with their children to their mutual benefit and enjoyment. It also appears that norms on timing and spacing are, to some degree, subject to simple swings of fashion.

To apply these generalizations to the New Zealand trends in birth timing and spacing, it would be expected that these have been influenced by changing economic conditions and social norms. They would also have been affected by increasing levels of control over the timing of conception and by medical and other advances which have reduced losses during pregnancy and birth. Within society, variations would have occurred according to individual and group differences in the above factors.

Trends in Birth Timing and Spacing

The longitudinal trends in the average timing and spacing of births, outlined in this section, are based on family survey data. No attempt was made to obtain information from respondents on their intended spacing of births, as such predictions are relatively unreliable, so that little analysis could be carried out for the most recent marriage period, 1952-1967. The topic is discussed in more detail for marriage periods, 1898-1927 and 1922-1952.

Table 6.1 shows the results of multivariate analyses of length of interval between marriage and first birth and average interval between

births for both marriage periods.

(See Table 6.1, page 118a)

As Table 6.1 indicates, the independent variables in the tests explained only a small amount of the variance in birth timing and spacing, a finding understandable in terms of the strong influence of the non-motivational factors involved. The results of the test are, however, of sufficient significance to be analyzed.

Marriage to First Birth

In marriage period, 1898-1927, there was little difference amongst five-year marriage cohorts in the average interval between marriage and first birth, whether the effects of other independent variables were excluded or not. The one exception was the significantly longer interval of the 1908-1912 marriage cohort. This cohort experienced a greater decline in average family size than that of any other cohort studied and it appears that a relative delaying of first births was one of the processes by which this was achieved. No association by five-year marriage cohorts was found for marriage period 1922-1952.

A younger age at marriage was associated with a longer average interval between marriage and first birth in both marriage periods. In the earlier period, those who had married at ages under 20 years had a significantly longer interval than those married at 20-24 years; in the more recent period, those who had married at 30 years or later had a shorter average interval than those married at any other age. When the family-size control was omitted, however, the age-at-marriage variable lost most of its effect. Those who had married young and had small families had tended to delay a first birth for longer than those who had married at older ages;

TABLE 6.1

MULTIVARIATE ANALYSES OF (a) LENGTH OF INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH[1] AND (b) INTERVAL BETWEEN BIRTHS,[2] FOR TWO MARRIAGE PERIODS, LISTING THE INDEPENDENT VARIABLES AND THE SIGNIFICANCE OF THEIR INDIVIDUAL AND COMBINED CONTRIBUTION TO EXPLANATION OF THE VARIANCE

	F Ratios			
	Marriage Periods			
	Mothers' 1898-1927		1922-1952	
	a	b	a	b
Marriage Cohort (5-year groups)	2.8*	0.1	1.2	2.4*
Times Married	0.2	1.8	1.0	0.5
Age at Marriage, Wife	2.4*	3.6*	3.3*	1.1
Childhood Residence, Wife	-	-	1.1	0.2
Occupation, Husband	1.4	0.5	0.9	0.3
Occupation before Marriage, Wife	-	-	0.4	0.9
Education, Wife	-	-	0.3	1.4
Education, Husband	-	-	0.5	3.6*
Religious denomination, Wife	-	-	1.9	0.8
Number of Births	6.9*	17.7*	20.4*	12.2*
Period of Residence in New Zealand, Mother	0.8	0.1	-	-
Denomination of Subject's Upbringing	0.5	1.0	-	-
Percentage Variance Explained	12.1	16.4	15.1	14.9

Source: Family Survey.

[1]Women with at least one child.

[2]Women with at least two children.

*Contribution to explanation of variance statistically significant at at least the 5 per cent level.

but, because their families were significantly larger, on the average, the interval in the majority of young marriages was no different from the average in the total sample.

It is apparent from Table 6.1 that the timing of first birth was more highly associated with family size than with any other independent variable included in the analyses. In both marriage periods, the larger the family size, the shorter was the average interval between marriage and first birth. This strong association was further explored for marriage period 1927-1952 through an assessment of the median interval by number of births and five-year marriage cohorts, as shown in Table 6.2, below.

(See Table 6.2, page 119a)

As Table 6.2 shows, the interval tended to decrease with an increase in number of births, the strongest contrast typically being between one-child and larger families. The final column of the table illustrates a clear trend towards a shorter average interval between marriage and first birth over this period. The length of the interval for marriage cohorts 1927-1932 and 1932-1937 shows the delay between marriage and first birth during the economic depression. Improvement in economic conditions was accompanied by a trend to having births sooner after marriage.

In marriage period 1898-1927, wives of men in professional and managerial occupations had a significantly longer gap between marriage and first birth, on the average, than wives of manual workers, even when numbers of births were statistically controlled. This finding offers support to the hypothesis that the earlier development of a planning orientation and practice amongst those of higher occupational status contributed to the fertility decline in the late nineteenth and early twentieth centuries. No significant differences by occupation or education were demonstrated for

marriage period 1922-1952. However, it is probable that an association would have been found for marriage cohorts 1922-1938, had the marriage period been divided for analysis. This conclusion is based on the following argument. The depression conditions, which would have affected the 1927-1937 marriage cohorts, were associated with a relatively long interval between marriage and first birth, as shown in Table 6.2. While the unfavorable economic climate was a deterrent to the hastening of first births generally, it is probable that those of lower socio-economic status would have felt the constraints most severely and, given an equal ability to control fertility, would have delayed first births for longer than those in more secure and better financial circumstances. However, speculating from the fact that the average family size of manual workers was still significantly larger than those of men in professional, managerial and business occupations in the marriage cohorts of this period, it appears probable that fertility control amongst manual workers was not yet as successful, on the average. By the same token, the contraction of differences in family size amongst marriage cohorts after 1937 suggests that fertility control was becoming socially more uniform. It is not possible to match these speculations adequately with the data on birth timing from the family survey, as sample numbers were too small to cross-classify the latter variable by both marriage cohort and occupational grouping, but they suggest that the lack of association between occupation and timing of first birth, in the broad period of 1922-1952, may mask a continuation of a longer average interval between marriage and a birth in the families of professional and managerial, than in those of manual workers, followed by a disappearance or slight reversal of the difference.

Roman Catholics and Protestants did not have significantly different

TABLE 6.2

MEDIAN NUMBER OF YEARS BETWEEN MARRIAGE AND FIRST BIRTH
BY NUMBER OF BIRTHS AND MARRIAGE COHORT

First Marriage, Wife. Women with at least One Child

Marriage Cohort	Number of Births					Number of Cases
	1	2-3	4-5	6	Total	
1927-1932	3.5	1.7	1.1	*	2.0	45
1932-1937	2.3	1.8	1.7	*	1.9	54
1937-1942	2.8	1.6	1.5	*	1.7	108
1942-1947	2.4	1.4	1.4	*	1.5	96
1947-1952	*	1.8	1.3	1.0	1.5	118

Source: Family Survey.

*Fewer than 10 cases.

intervals between marriage and first birth in either marriage period, when numbers of births were statistically controlled. However, there was a tendency for Roman Catholics to have a birth sooner after marriage, a tendency which became somewhat stronger in marriage period 1898-1927, when the family-size control was omitted and reached the five-per-cent level of significance in marriage period 1922-1952. Overall it appeared that first births to Catholics tended to occur a little sooner after marriage than those to Protestants, a difference associated with the less frequent use of the more efficient contraceptive techniques by Catholics at this early stage of marriage and their slightly higher family-size ideals.

Division of respondents by type of childhood residence, for marriage period 1922-1952, did not reveal any differences in average interval between marriage and first birth. This adds to the evidence that, in New Zealand, the family formation patterns of urban residents brought up in the country have not differed from those of city dwellers with urban backgrounds.

Average Interval between Births

There was no association between date of marriage and birth spacing in marriage period 1898-1927, whether the effect of family size was excluded or not. In marriage period 1922-1952, the most dramatic difference amongst marriage cohorts was a marked contraction of the interval between births in the cohort of 1947-1952. The closer spacing of births in this cohort was independent of the effects of its larger family size, a factor which would normally be associated with shorter intervals between births. When the family-size control was removed, the difference between this and earlier cohorts became even greater. These findings offer further evidence of a changed pattern of family formation in this post-war cohort.

In marriage period 1898-1927, younger marriages were associated

with longer average intervals between births, when the effects of family size were excluded. However, as with interval between marriage and first birth, the association disappeared when the family-size control was omitted. In other words, those who had married young and had few children tended to space them widely, but because most young marriages produced relatively large families, there was no overall difference in birth intervals according to age at marriage. There was no association between marriage age and birth spacing in marriage period 1922-1952.

Birth spacing was highly associated with family size in both marriage periods, larger families being spaced more closely than smaller. The relationship was further explored for marriage period 1927-1952, through a calculation of the average interval between births according to number of births and marriage cohort, as shown in Table 6.3, below.

(See Table 6.3, page 122a)

Table 6.3 demonstrates the closer spacing of children in larger families. It also shows a tendency towards a contraction of the average interval between births over the marriage period. As suggested earlier, a significant change in the spacing of births may result from responses to changing economic conditions or from changes in social norms on the optimal relationships between the ages of children. It is probable that the closer spacing of children from the end of the depression to the most recent cohort represented in this analysis was influenced by changes in both these variables. Encouraged by opportunities to return to work or to participate more fully in other social activities, the period of child bearing and child care has increasingly come to be regarded as just one stage in the life of a mother and one which should not be over-prolonged if other opportunities

TABLE 6.3

MEDIAN NUMBER OF YEARS BETWEEN BIRTHS BY NUMBER OF BIRTHS AND MARRIAGE COHORT

First Marriage, Wife. Women with at least Two Children

Marriage Cohort	Number of Births						
	2	3	4	5	6	Total	Number of Cases
1927-1932	3.5	4.1	3.0	*	2.6	3.6	40
1932-1937	3.7	4.3	3.7	3.8	2.4	3.8	45
1937-1942	3.8	2.7	3.6	3.3	2.2	3.2	93
1942-1947	3.5	3.2	3.4	3.5	2.1	3.4	76
1947-1952	3.5	3.1	2.6	2.4	2.1	2.9	109

Source: Family Survey.

*Only two cases.

are to be maximized. Assessments on changes in the social norms related to age relationships within the family are more speculative. However, there is little doubt that a strong feeling has developed that parents should be able to share the interests and activities of their children and that this possibility is related to parental age. A related idea is that children should be close enough in age to share interests and activities. It is further possible that the closer spacing of children may have represented a reaction of the more recent parents against the situation typical of their childhoods in the 1930s and 1940s when the results of the extended intervals between births in the depression years were felt in a lack of companionship with siblings. However, whatever the sources of these opinions, it has not been considered ideal in recent years to have a child at an age where it is difficult to participate in his activities, or one who is separated from his siblings by many years.

The variable, education of husband, was related to the spacing of births in marriage period 1922-1952. The wives of men whose formal education had ended before they had reached the third year of high school spaced their births more closely, on the average, than those of men who had had three or more years of high school, but no tertiary education. The average interval between the births of the wives of those with tertiary education was intermediate between the averages of the other two categories, not significantly different from either. This was a development which might have been expected to accompany the emergence of a U-shaped correlation between socio-economic status and family size. The smaller family size amongst those in the middle-status grouping would typically be associated with longer intervals between births than those in the somewhat larger families of members of the highest and lowest strata.

No significant differences were found in the average intervals between births of Roman Catholics and Protestants, although there was a tendency for Catholic spacing to be a little closer.

Two further aspects of birth spacing to be discussed are the differences between each order of births and trends in the length of the child-bearing period. Table 6.4, below, shows the average number of years between births of a specified order by marriage cohort for marriage period 1927-1952. The small number of women with five or more children made it necessary to restrict the calculations to four birth orders.

(See Table 6.4, page 124a)

Table 6.4 shows clearly the usual tendency for the time between marriage and first birth to be shorter than subsequent intervals. The increase in average interval after first birth is partly due to the inclusion of larger proportions of last births in the later birth orders. As a United States cohort fertility study reported: "A woman's last child is typically born at a much later interval since marriage than other children of the same birth order whose mothers went on to have yet more children."[3] This is a consequence of the tendencies for larger families to be more closely spaced and for the interval before the last birth to be longer than others, on the average, often because the last child is not planned.

The table also indicates that the average interval between marriage and first birth was increasing again in cohorts after 1947-1952. This suggests a conscious delaying of first births by many women in the two most recent cohorts for which this interval could be calculated, understandable

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[3] C. V. Kiser, W. H. Grabill, and A. A. Campbell, Trends and Variations in Fertility in the United States (Cambridge, Mass.: Harvard University Press, 1968), p. 284.

TABLE 6.4

MEDIAN NUMBER OF YEARS BETWEEN BIRTHS OF A SPECIFIED ORDER BY MARRIAGE COHORT

Marriage Cohort	Marriage to First Birth	1st to 2nd	2nd to 3rd	3rd to 4th
1927-1932	2.0	2.7	3.4	
1932-1937	1.9	2.9	2.8	3.1
1937-1942	1.7	2.9	2.6	4.3
1942-1947	1.5	2.4	3.0	4.0
1947-1952	1.5	2.2	2.7	2.5
1952-1957[1]	1.9	2.0	2.5	-
1957-1962[1]	1.7	2.0	-	-

Source: Family Survey.

[1]Partly projected through comparison of number of births achieved and expected.

in terms of the increasing number of women who continue in employment after marriage. The reader may question this interpretation on the basis that the interval between marriage and first birth was shorter in the 1957-1962 than in the 1952-1957 marriage cohort. Did this indicate the beginning of a general reversal to having children more quickly after marriage? Analysis of the reasons for the shorter interval showed that this was not the case, as it could be completely explained as the result of an increase in the proportion of pregnant brides. Family survey data showed the increase as follows: 11.4 per cent of the wives in the 1947-1952 cohort were pregnant at marriage, 13.2 per cent of the 1952-1957, and 18.5 per cent of the 1957-1962. When these women were eliminated from a calculation of the average interval between marriage and first birth, its length increased from 1.8 years in the 1947-1952 cohort to 2.2 years in both the 1952-1957 and 1957-1962, an increase of almost five months. Where choice was potentially involved, then, the longer average interval was sustained.

Some indication of the variation in time taken to complete child bearing is given in Table 6.5, below, cross-classified by marriage cohort and Protestant/Catholic denomination of wife.

(See Table 6.5, page 125a)

As would be expected, Roman Catholics took longer than Protestants, on the whole, to complete child bearing because, although the average intervals between their births were not significantly different from Protestant, their average family size was somewhat larger.

The majority of women completed child bearing within ten years of marriage in the period represented in Table 6.5. There was a substantial decline in the proportion of women with a child-bearing period of fifteen

years or longer. Nearly a fifth of the "depression" cohorts fell into this category, but the proportion decreased to 11.5 per cent of the 1947-1952 cohort, although the proportion of large families, four or more children, was greater in the latter than the former group. The smaller proportion of families completed within a marriage duration of less than five years in the 1947-1952 cohort resulted from a sharp decline in the proportion of families with fewer than three children.

In summary, the main findings on birth timing and spacing from the family survey were that they were more strongly associated with differences in family size than any other independent variable tested. The larger the family size, the shorter was the average interval between marriage and first birth and the shorter the average interval between births. Age at marriage was significantly associated with variations in birth timing and spacing only when the effects of family size were controlled. In the earlier marriage period, occupational status was positively associated with the average length of time between marriage and first birth; in the later period, the wives of husbands with a median length of education had a longer average interval between births than those of the groups with the most and the least schooling.

Trends in birth timing and spacing were closely interrelated with changes in average family size. However, the most recent cohort whose pattern was studied in detail, that of 1947-1952, showed an acceleration in family building that was independent of the effects of an increase in family size. This was a fluctuation in pattern, rather than a new trend and can be attributed mainly to the rapid establishing of families after war-time delays.

The overall trends from the late 1920s were a decrease in the

TABLE 6.5

PERCENTAGE OF WOMEN COMPLETING THEIR CHILD-BEARING WITHIN SPECIFIED INTERVALS AFTER MARRIAGE BY PROTESTANT-ROMAN CATHOLIC DENOMINATION AND MARRIAGE COHORT

Women with at least One Child

Religious Denomination	Interval in Years				No. of Cases	Marriage Cohort
	1-4	5-9	10-14	15+		
Protestant	23.8	35.0	22.5	18.7	80	1927-1937
Catholic	21.4	35.7	21.4	21.4	14	
Total	23.4	35.1	22.3	19.2	94	
Protestant	21.6	43.3	23.4	11.7	171	1937-1947
Catholic	20.7	27.6	34.5	17.2	29	
Total	21.5	41.0	25.0	12.5	200	
Protestant	8.9	54.4	26.7	10.0	90	1947-1952
Catholic	4.3	26.1	52.2	17.4	23	
Total	8.0	48.7	31.8	11.5	113	

Source: Family Survey.

average interval between marriage and first birth until the interval began to lengthen again with the marriage cohort of 1952-1957, and a reduction in the interval between births. It is probable that the most recent cohorts for which data were available, 1952-1957 and 1957-1962, began a type of family-building pattern new to New Zealand, a relatively long interval between marriage and first birth, followed by a series of births more closely spaced than was usual in the past. Changes in socio-economic conditions, especially greater opportunities for women to continue working after marriage and wider acceptance of this practice, have helped to shape this pattern. It has probably also been associated with changes in social norms concerning ideal relationships between the ages of children. As far as can be deduced from calendar-year statistics, the pattern has continued through the 1960s and early 1970s. While there is no reason to expect a sudden change, it is difficult to predict how long this type of family-building pattern will last; for, to the extent that birth timing and spacing is a matter of choice, it will continue to respond to changes in economic conditions and social norms.

A Note on Household Units[4]

Three aspects of households, which have a bearing on the timing of the family life cycle or the living arrangements of the nuclear family are briefly discussed in this section. Family survey data are examined to ascertain how households change in size as duration of marriage increases, the time at which children leave the parental household and the extent to

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[4] Household was defined as an entire group of people occupying a dwelling unit and sharing meals.

which households include members who are not part of the nuclear family unit. Trends in the first two aspects are given in cross-sectional form only, but broad changes over time are shown for family composition.

Table 6.6, below, shows the percentage distribution of household sizes and average number of persons in a household, for marriage cohorts 1927-1932 to 1962-1967.

(See Table 6.6, page 128a)

As Table 6.6 shows, those married between ten and twenty years had larger households than those married for a longer or a shorter period. This pattern is largely determined by number of births, the length of the child-bearing period and the time at which children leave parental homes to form or join other households. Findings on the first two factors have already been described, but the last point bears examination.

Table 6.7, below, shows the percentage of the children born to a marriage or adopted, who were still living in their parents' household at time of interview. It also shows the percentage of households which included at lease one child, for each marriage cohort from 1927-1932 to 1952-1957.

(See Table 6.7, page 128a)

This distribution for Wellington households makes it quite apparent that New Zealand children have not typically left their parents' home at young ages, at least in an urban area where educational institutions at all levels and a variety of jobs are available.

The first row in Table 6.7 indicates that nearly all the children of marriages of 15-20 years' duration, the great majority of those of 20-25

TABLE 6.6

PERCENTAGE OF HOUSEHOLDS WITH SPECIFIED NUMBERS OF PERSONS AND MEAN NUMBER BY MARRIAGE COHORT

First Marriage, Husband and Wife

Number in Household	Marriage Cohort 1927-1932	1932-1937	1937-1942	1942-1947	1947-1952	1952-1957	1957-1962	1962-1967
2	52.0	54.4	26.1	9.3	4.0	4.8	4.5	37.2
3	38.0	29.8	30.4	23.4	8.9	5.6	9.1	43.8
4	8.0	14.0	23.5	27.1	21.0	24.8	42.0	14.9
5	-	1.8	13.0	19.6	29.8	41.6	25.0	4.1
6	-	-	5.2	15.9	20.2	13.6	13.6	-
7	-	-	1.7	2.8	6.5	6.4	5.7	-
8	2.0	-	-	0.9	7.3	0.8	-	-
9	-	-	-	-	0.8	2.4	-	-
10+	-	-	-	0.9	2.4	-	-	-
Mean Number	2.7	2.6	3.5	4.3	5.1	5.0	4.5	2.9
Number of Households	50	57	115	107	124	125	88	121

Source: Family Survey.

TABLE 6.7

PERCENTAGE OF CHILDREN LIVING WITH PARENTS AND PERCENTAGE OF HOUSEHOLDS WITH AT LEAST ONE CHILD BY MARRIAGE COHORT

First Marriages

Households with Children	Marriage Cohort 1927-1932	1932-1937	1937-1942	1942-1947	1947-1952	1952-1957
Children Living with Parents[1]	19.0	24.2	53.0	88.8	98.0	100.0
Households with at least One Child	42.0	44.0	73.9	87.9	96.0	94.4
Households which Have Included Children and Have at least One Child Remaining	45.7	45.5	77.0	97.0	100.0	100.0
Number of Households	50	57	115	107	124	125

Source: Family Survey.

[1]Calculated by dividing number of children living at home (including adopted children) by number of births + number of children adopted, minus number of deaths x 100.

years' duration, and still over half of those of 25-30 years' duration lived in their parents' homes. Even in marriages which had lasted for 35-40 years, nearly a fifth of the "children" were living with parents, although 80 per cent had left school. Nearly all children remaining in their parents' household were unmarried; in New Zealand, married children have not commonly lived with parents, as shown in Table 6.8, below.

Changing the perspective to an examination of how long parents have had at least one of their children at home, it appears from the second and third rows of Table 6.7 that the average time has been between 30 and 35 years from time of marriage. It should be emphasized that this finding applies to the marriage cohorts of the 1930s. The average time may well be decreasing, as suggested by the similarity of the percentages for marriage cohorts 1927-1932 and 1932-1937. A variety of factors, including younger marriage ages, suggest that children are indeed leaving home earlier, on the average, today. However, a longitudinal analysis would be needed to give this statement statistical verification.

Proceeding to the question of household composition, Table shows the percentages of the households of respondents and their mothers, which included members not belonging to the nuclear family unit.[5] The relationship of the additional members to the husband or wife is also indicated.

(See Table 6.8, page 129a)

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[5]Only the respondents who stated that they could remember back to the time when their parents had been married for as long as respondents had at time of interview, and whose parents' marriage was still intact at that time, were asked questions about their parents' household. Their answers provided a broad intergenerational comparison.

Table 6.8 indicates that it has become less common for households to include people who are not part of the nuclear family unit. "Live-in" help has practically disappeared, and brothers and sisters, cousins, uncles and aunts are infrequently attached to nuclear family units today. Although it has also become less common for parents to live with their married children, they are still more likely to do so than any other category of non-nuclear family members. Boarders and friends are also still represented, though in small numbers. In summary, the table shows an intergenerational decrease in the numbers and kinds of additional members living in a household with a nuclear family unit. However, it should be noted that the vast majority of the households in the previous generation included only nuclear families. When it is considered that the households represented in this table span a century of family life, there are some grounds for concluding that the usual pattern in New Zealand has always been for intact nuclear families to comprise a household on their own.

This chapter has described the timing and spacing of births, the period in which the family reaches its maximum size, its subsequent decrease in size as children leave the parental home, and some changes in household composition. Chapter VII will describe the final point in the family-life cycle, the dissolution of the nuclear family unit.

TABLE 6.8

NUMBER OF HOUSEHOLDS WITH NUCLEAR FAMILY ONLY AND THOSE WITH SPECIFIED CATEGORIES OF ADDITIONAL MEMBERS BY MARRIAGE COHORT OF SUBJECT

Subject's and Her Parent's Households

Household Composition[1]	Marriage Cohort							
	1927-1937		1937-1947		1947-1957		1957-1967	
	Subject	Mother	Subject	Mother	Subject	Mother	Subject	Mother
Nuclear Family Only	50	42	176	148	205	166	181	133
Parents	3	5	6	15	11	19	2	35
Married Children	1	1	1	-	-	-	-	-
Other Lineal Relatives	-	-	-	-	-	-	2	-
Siblings	-	2	-	3	1	8	3	6
Other Collateral Relatives	-	1	1	4	1	2	5	2
More than One of Above Type of Relatives	-	-	-	4	-	4	-	2
Boarder of Friend	3	3	4	8	1	9	5	6
Paid Help	-	3	-	7	1	14	-	13
Other	-	-	2	1	3	1	1	2
Total Households	57	57	190	190	223	223	199	199
Percentage with Non-Nuclear Family Members	12.3	26.3	7.4	22.1	8.1	25.6	8.6	33.2

Source: Family Survey.

[1]Categories of relatives refer to Subject's or Husband's Relatives.

CHAPTER VII

THE DISSOLUTION OF THE NUCLEAR FAMILY UNIT

In the early decades of European settlement in New Zealand, formal divorce was a rare occurrence. British religious and social values led to a strong disapproval of a man's divorcing his wife and an even stronger antipathy to a wife's obtaining a divorce. These were the attitudes brought to New Zealand and their influence was reinforced by the transference of British matrimonial law, under which divorce was granted only on the grounds of a wife's adultery or, alternatively, of a husband's adultery under circumstances which caused grievous injury to wife and family. In the 1890s, a decade in which many New Zealand-modified attitudes were embodied in law, the legal grounds for divorce were expanded and the clause discriminating aginst women was removed. Subsequently, grounds for divorce have been further liberalized and disapproval of divorce has gradually weakened, although it has not completely disappeared.

In New Zealand trends in divorce rates, linked with these changes in laws and attitudes, are outlined in this chapter; changes in overall rates, the changing contribution of divorce to dissolution of families with dependent children and a recent distribution of age-specific divorce rates are described.

The latter aspects are examined, because in a study of family structure designed to provide a basis for understanding family functioning, it is just as important to examine trends in the timing of divorce as in

the incidence, as divorce has different effects on functioning at different stages of the family-life cycle. It is particularly important to discover changes in the rates of couples in the child-rearing stage, especially in a society where expectations of children are typically based on the assumption that they are members of two-parent households. No attempt is made to analyze the social distribution of divorce rates, as little research has been carried out on this topic. However, one short study, based partly on 1951 census data, showed that New Zealand differentials were similar to those in other modern societies, higher divorce rates being associated with lower occupational status, lower income, younger age at marriage and bridal pregnancy.[1]

The second section in the chapter discusses changes in mortality rates as they have affected family composition and the timing of the family life cycle. Trends in the mortality rates of infants, children and mothers around the period of childbirth are examined. Changes in average length of marriage, according to marriage age and to the mortality rates experienced throughout the marriage durations of successive birth cohorts, are also assessed.

Divorce

Recourse to divorce as a response to marital difficulties has become more common over the century, as shown in Table 7.1, below.

(See Table 7.1, page 132a)

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[1] A. J. Nixon, Divorce in New Zealand: A Preliminary Survey. Bulletin 46, Sociology Series 1, Auckland University College, 1954.

TABLE 7.1

DIVORCE RATES IN CENSUS YEARS -- DECREES NISI[1]

(Number of Divorces per 1000 Married Women, Including Legally Separated)

Census Date	Rate	Census Date	Rate
1891	0.2	1926	2.4
1896	0.4	1936	2.9
1901	0.8	1945*	5.1
1906	0.9	1951*	3.9
1911	1.1	1956*	3.2
1916	1.1	1961*	3.3
1921	2.6	1966*	3.6

Sources: (a) Numbers of Divorces from Statistics of New Zealand before 1921, subsequently, Report on Justice Statistics; (b) Census Reports, Ages and Marital Status.

*Includes Maoris in numerator and denominator. Statistics related to the number of divorces in a year have always included Maoris; but, because their divorce rates were very low till more recent years, they have not been included in the denominator of the rate shown until 1945.

[1]Decrees Nisi are shown rather than Decrees Absolute for two reasons: (a) Their use allows the trend to be started from an earlier date. (b) The changes can be more precisely linked to changes in divorce law and social conditions, as Decrees Absolute are not issued for some time after a Decree Nisi has been granted. The divorce rates, according to Decrees Nisi, are slightly higher than those according to Decrees Absolute (e.g., 1916, 1.1 and 1.0; 1956, 3.2 and 3.0, respectively), as not all couples take the final steps in procedure. Over the period for which the two rates could be compared, however, the trends were almost identical.

As Table 7.1 shows, divorce rates have not shown a consistent increase. They have risen more steeply in some periods than others and a sudden rise has tended to be followed by a period of stable, or even declining, rates. Marked changes have been associated with the liberalization of the legal grounds of divorce, resettlement after the two major wars in the century, or both.[2] Table 7.2, below, details the changes in divorce rates in three periods: the years around 1898 when the grounds of divorce were expanded; the years around the end of World War I, including the effects of additions to grounds of divorce in 1920; the years around the end of World War II.

(See Table 7.2, page 133a)

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[2]Additions and changes in the most frequently-used grounds of divorce in New Zealand have been as follows:

1867 -- Only grounds: Wife's adultery; Husband's aggravated adultery.

1898 -- Plus -- Husband's simple adultery. Desertion for five years. Non-compliance with a court decree for restitution of conjugal rights.

1907 -- Repeal of "non-compliance" ground.

1913 -- Plus -- Constructive desertion by husband.

1920 -- Plus -- Three years' separation under Court Order or Agreement. Reduction of desertion period to three years. Restoration of non-compliance ground.

1921 -- Three years' separation ground limited to unopposed cases and those where petitioner's conduct not shown to be contributory.

1953 -- Plus -- Seven years' living apart without likelihood of reconciliation where petitioner's conduct not shown to be contributory.

1963 -- Seven years' of living apart without likelihood of reconciliation with 1953 condition abolished. Three years' separation ground with 1921 condition abolished.

1968 -- Separation by court order or agreement reduced to two years. Years of living apart without likelihood of reconciliation reduced to four years. Court required to consider the possibilities of reconciliation and couples may be required to undertake conciliation counselling.

During the first period, as Table 7.2 shows, the divorce rate almost trebled as the petitions following the expansion of divorce grounds in 1898 began to take effect. It is conceivable that resettlement problems related to soldiers' returning from the South African War in each year, 1899 to 1902, made some contribution to the increase in rates at that time. From 1900 to 1918, the rate was relatively stable, ranging between 20 and 29 divorces per 1000 marriages. The end of World War I saw a sharp rise in divorce rates in response to the deterioration of many marital relationships and changes in circumstances during the war, and facilitated by an increase in the legal grounds of divorce in 1920. The new level was sustained until almost the end of World War II, when another sharp increase occurred. Unlike the earlier sudden increases, this was followed by a decline in the rate in the 1950s, at least partly because the increase after World War II was not accompanied by the further liberalization of legal grounds of divorce, which had provided a reinforcement of the earlier increases. After most of the divorces, related to difficulties in re-establishing marriages, had been finalized, the rate settled at a level somewhat higher than that common before World War II. A slight increase occurred between 1965 and 1968, followed by another acceleration in 1969 as the conditions of the 1968 Matrimonial Proceedings Act began to take effect. The Act's substantial shortening of the periods of separation and of living apart without likelihood of conciliation before a divorce petition could be filed (footnote 2) constituted the most effective liberalization of divorce grounds since 1920, as apart from adultery these had recently been the most commonly-used legal grounds. The divorce rate has been sustained at the higher level through the first half of the 1970s, but a comparison of the numbers of decrees nisi with the decrees absolute granted after 1971 suggests that a levelling-off has begun.

TABLE 7.2

A DETAILED OUTLINE OF THREE PERIODS OF CHANGE IN THE NEW ZEALAND LEVEL OF DIVORCE. DECREES NISI

(Number of Divorces in Specified Year (x) per 1000 Marriages in Sum of Year (x-5), year (x-6) and year (x-7) + 3)

Year	Rate	Year	Rate	Year	Rate
1897	8.7	1917	25.3	1943	96.4
1898	8.1	1918	31.3	1944	116.7
1899	11.2	1919	52.8	1945	117.5
1900	20.6	1920	61.2	1946	133.9
1901	23.3	1921	71.9	1947	143.2
1902	19.7	1922	66.1	1948	159.6
1903	25.8	1923	69.5	1949	148.2
1904	20.0	1924	88.1	1950	125.3
1905	21.0	1925	65.0	1951	100.3
				1952	93.8

Sources: (a) Statistics of New Zealand to 1920, subsequently, Reports on Justice Statistics.

(b) Reports on the Vital Statistics of New Zealand.

Divorce rates in New Zealand, then, have increased in association with expansion of legal grounds and with the after-effects of war. Another influence has undoubtedly been a lessening of the social disapproval of divorce, changing attitudes generated, at least partly, through the increase itself. However, the rate is not high for a developed country.[3]

As already suggested, divorce affects a family differently according to the stage of the family life cycle at which it occurs. Unfortunately, statistics were not available to trace trends in divorce rates by marriage duration as a basis for assessing the changing affect of divorce on family structure, but an impression of the stages at which marriages were dissolved in the 1960s can be obtained from Table 7.3, below, which gives age-specific rates for women granted divorces in 1966.

(See Table 7.3, page 135a)

Table 7.3 shows that divorce rates varied little between ages 25 and 44 years. Rates to women under 25 years were low and rates at ages from 45 years declined remarkably slowly. This pattern was not unlike that in Australia in the 1950s, but the age-spread of divorce was even wider in New Zealand. The distributions in these two countries contrast sharply with those in the United States, where divorce rates are high at young ages and decline much more rapidly with increasing age. Table 7.4, below, compares

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[3]A calculation of the percentage of marriages which end through divorce was based on 1966 age-specific divorce rates as shown in Table 7.3, above. The rates were applied successively to a hypothetical marriage cohort of women, married at age 22.5 years, to assess the number of divorces which would have occurred in this group, had they experienced the 1966 rates throughout their married lives. The cohort was simultaneously reduced by applying survival rates derived from the 1965-1967 non-Maori female life table. On this basis it was discovered that 14.7 per cent of the marriages would end in divorce. This is likely to be a reasonable estimate for recent years, although the percentage is now increasing.

the Australian and United States distribution in 1954.[4] The American figures are given by duration of marriage but can be translated approximately into age categories, as shown by the correspondence between the two distributions for Australia.

(See Table 7.4 on page 136a)

The distribution for the United States shows that the highest probability of divorce occurred within the first five years of marriage, the rate diminished sharply by marriage duration 5-9 years, and then showed a definite and consistent decline with increasing duration. The pattern in Australia was quite different, a very low divorce rate in the first five years of marriage, a slight peak at 5-9 years, followed by a gradual decline. A striking contrast between the United States' pattern and those in Australia and New Zealand is the difference in divorce rates in the first few years after marriage. Why should the United States have their highest rate at this time when the rates in the other countries are almost negligible? Access to more rapid divorce procedures can explain a fraction of the difference, but the main explanation must lie in differences in attitudes to marriage and divorce. It is doubtless true that divorce is more readily accepted in most social groupings in the United States than in Australia and New Zealand, generally. The much greater frequency of divorce in the United States, alone, would imply this, and the conclusion is supported by many social observors, including a well-known family theorist who regards the family in the United

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[4] A comparison for the mid-1960s would have been preferable. However, patterns of divorce by age or marriage duration typically change slowly. As Lincoln Day, p. 342, reported on Australian trends from the beginning of the twentieth century, ". . . it seems safe to conclude that there has been little tendency in Australia for divorce to occur either earlier or later in the course of a marriage."

TABLE 7.3

AGE-SPECIFIC DIVORCE RATES, 1966
(Number of Divorces per 1000 Married Women)

Age Group	Rate	Age Group	Rate
16-19	0.7	50-54	3.3
20-24	2.5	55-59	2.5
25-29	4.8	60-64	2.0
30-34	4.4	65-69	1.3
35-39	4.3	70-74	0.7
40-44	4.5	75-79	0.7
45-49	4.0		

Prepared by C. J. O'Neill, in 1970, from Justice Department record cards for New Zealand women divorced in 1966, and 1966 Census distributions of female marital status by age group.

TABLE 7.4

DIVORCE RATES BY AGE OF DIVORCING WIVES, AUSTRALIA, AND BY DURATION OF MARRIAGE, AUSTRALIA AND THE UNITED STATES, 1954
(Number of Divorces per 1000 Married Women)

Divorce Rates by Age		Divorce Rates by Duration of Marriage		
Age Group (Years)	Australia	Duration of Marriage (Years)	Australia	United States
15-19	1.3	Under 5	1.6	21.8
20-24	3.4	5-9	5.6	13.3
25-29	5.5	10-14	4.7	8.1
30-34	5.1	15-19	3.7	6.3
35-39	4.6	20-24	3.3	5.2
40-44	3.8	25-29	2.2	3.7
45-49	2.9	30-39	1.4	2.0
50+	1.1			

Source: Lincoln H. Day, "Patterns of Divorce in Australia and the United States," Kinship and Family Organization, ed. Bernard Farber (New York: John Wiley and Sons, 1966), p. 343 and p. 347.

States as in transition from a closed to an open system, or from one which focusses on orderly generational replacement to one where husband and wife are permanently available for re-marriage.[5] The latter extreme has certainly not been reached in the United States, but many groups are nearer that end of the continuum than is the case in Australia and New Zealand. However, the greater social acceptability of divorce is only part of the explanation of the higher rates in the years immediately after marriage. Another clue may be derived from research on the changing ranking of marriage expectations. Research has indicated that companionship between wife and husband has become the most important marriage value in the United States, now being considered more important than more traditional values such as the chance to have children, and economic support.[6] It is likely that marriage values in Australia and New Zealand are being revised in this direction, also; but, again, it is probable that the change is not as far advanced as in the United States. Consequently, while the unlikelihood of being able to achieve a satisfactory companionship may be obvious early in a marriage, and may be considered sufficient reason to institute divorce proceedings in America, the importance of other marriage values may more often prevent this step from being taken, or being taken so soon, in Australia and New Zealand. The arguments presented are speculative and incomplete and would need to be expanded and tested before any firm conclusions could be reached on the reasons for the markedly different timing of divorce in the countries compared. Regardless of the reasons for the different patterns, they indicate

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[5]Bernard Farber, Family Organization and Interaction (San Francisco: Chandler Publishing Co., 1964), Chapters 1 and 4.

[6]Robert O. Blood, Jr., "Impact of Urbanization on American Family Structure and Functioning," Sociology and Social Research 49, No. 1 (October 1964): 5-16.

that proportionately larger numbers of divorcing couples in New Zealand are likely to have children than in the United States. This does not imply, of course, that proportionately fewer children are affected by parental divorce in the United States than New Zealand; with a divorce rate approximately 2.5 times as high in the former as in the latter country, this is clearly untrue.

In New Zealand, both the proportion of children with divorced parents and, less markedly, the proportion of divorcing couples with dependent children, have changed over time. The trends are described in the following pages, as far as they could be determined from available statistics which often permitted only an indirect assessment. Consideration is also given to family disruption through parental death or separation during the stage where there are likely to be dependent children.

Some indication of changes in the proportion of families affected by divorce, while probably including dependent children, is given in Table 7.5, below. The table also shows trends in the proportion of families affected by legal separation of parents, widowhood, and a combination of the three categories of marital dissolution. Figures for widowers had to be given separately, but must be taken into account in an assessment of the changing proportion of families losing a parent while there is still a high probability of their including dependent children.

(See Table 7.5 on page 138a)

According to this table, based on marital status at census dates, the proportions of women divorced and legally separated, at the child-rearing stages, increased slightly between 1926 and 1966, while the proportions of widows and widowers decreased substantially. Overall, it is

TABLE 7.5

A. NUMBER OF WOMEN WIDOWED, DIVORCED, LEGALLY SEPARATED AND TOTAL NO LONGER MARRIED[1] AS PERCENTAGE OF EVER-MARRIED WOMEN, 20-49 YEARS AT SELECTED CENSUS DATES.[2] B. NUMBER OF WIDOWED MEN AS A PERCENTAGE OF EVER-MARRIED MEN, 25-54 YEARS

	A. Women				B. Men
Census Date	Widows	Divorced	Legally Separated	Total No Longer Married	Widowers
1926	4.5	0.6	1.0	6.2	2.9
1936	3.6	1.0	1.5	6.1	2.4
1956	2.0	1.4	1.3	4.7	0.9
1966	1.8	1.2	1.5	4.4	0.8

Source: Census Volumes, Ages and Marital Status.

[1]Legally separated women, although technically still married, are included in Total, No Longer Married, as they represent broken homes.

[2]1926 is the earliest census used, as it was the first census in which a distinction between legally separated and married persons was made.

probable that the proportion of one-parent homes had declined. However, it will be appreciated that no information about separation, other than legal separation, is included. Further, no information is available on the proportion of people who had been widowed or divorced and had re-married by the time of the relevant census inquiry. Consequently, the figures in Table 7.5 understate the proportion of homes which had been disrupted by widowhood or divorce at some time. A study of re-marriage rates, however, can indicate whether the proportions in the no-longer-married categories had been reduced to a greater extent through re-marriage at some census dates than others. Table 7.6, below, gives re-marriage rates for men and women, 20-49 years, around the relevant census dates.

(See Table 7.6 on page 139a)

Table 7.6 shows some tendency towards an increase in re-marriage rates for widowed and divorced, separately, but it was neither marked nor consistent. On the other hand, re-marriage rates for all no-longer-marrieds rose substantially between 1936 and 1956-1966, through an increase in the percentage of divorced persons at the expense of widowed, in the population. Divorced people typically have higher re-marriage rates than widowed, and New Zealand has conformed to this pattern. It therefore appears that the proportions of no-longer-marrieds were reduced to a greater extent through re-marriage in the later than the earlier period and that, consequently, the proportionate decrease in the number of families disrupted through widowhood or divorce sometime in the child-rearing stage, is probably somewhat overstated by the trend shown in Table 7.6.

Considering divorce trends, separately, a direct measurement of the percentage of divorces involving children can be based on distributions

of the year's divorces according to numbers of living issue, statistics available from 1924. In that year, 35 per cent of the divorces were granted to couples with no living children, and the percentage varied between 30 and 38 over the following thirty years. In the mid-1950s, however, the percentage began a slow decrease and by 1966, only a quarter of the divorcing couples were childless.

In summary, it appears that divorce rates have risen significantly over the century and that more recently the proportion of divorces involving children was increasing. Further, the relatively even age-spread of divorce has meant that proportionately larger numbers of divorcing couples have children in New Zealand than in a society like the United States where divorce rates are at their peak in the very early years of marriage and decrease sharply from that time. Finally, it is probable that while there has been an increase in divorce rates amongst couples in the child-rearing stage, decrease in parental mortality has been even greater, so that the proportion of families losing a parent at this stage has lessened.

Mortality

Marked decreases in mortality rates over the past century have had pronounced effects on family structure and the timing of the family life cycle in New Zealand. Life expectancy at birth, according to the mortality rates of 1880-1892, the earliest period for which official life tables were constructed, was 54.4 years for males and 57.3 years for females; e mortality rates of the 1965-1967 period gave an increased expectancy of life at birth of 68.7 years for males and 74.8 for females. No improvement has occurred since that time. These expectancies summarize the combined effect of mortality rates at all ages and are calculated according to the rates of a particular period, rather than the rates experienced by a birth cohort as

TABLE 7.6

RE-MARRIAGE RATES OF WIDOWED, DIVORCED AND TOTAL NO-LONGER-MARRIED WOMEN AND MEN, 20-49 YEARS, AROUND SELECTED CENSUS DATES

(Number of Re-marriages per 1000 Widowed, Divorced and No-Longer-Married Women and Men, Respectively)

Census Date	Women			Men		
	Widows	Divorced	Total No-Longer-Married	Widowers	Divorced	Total No-Longer-Married
1926	46	259	71	105	189	125
1936	37	208	75	108	187	138
1956*	57	244	125	118	235	192
1966*	54	224	122	115	214	203

Source: Reports on the Vital Statistics of New Zealand for three years round each Census date. Census Volumes, Ages and Marital Status.

*Includes Maoris.

it passes through successive stages. In this section, the cohort approach is taken. As far as possible, changes in mortality levels which closely relate to nuclear family structure are analyzed by birth cohort. The specific stages examined are infancy (under one year), childhood (defined as 1 to 14 years inclusive), mothers at childbirth, marriage dissolution through the death of one marriage partner, and the length of survival of the remaining marriage partner.

In New Zealand, as in most developed countries, the greatest reductions in mortality rates have occurred in infancy and childhood. The trends are shown in Tables 7.7 and 7.8, below.

(See Tables 7.7 and 7.8 on page 141a)

Table 7.7 shows a consistent decline in infant mortality rates, those in the 1891-1895 period being about five times higher for males, and six times higher for females, than they were in 1965-1967. The decline has slowed in the last fifteen to twenty years, to be expected in view of the low rates already achieved by the 1950s. Throughout this century, New Zealand non-Maori infant mortality rates have been amongst the lowest in the world.

Table 7.8 indicates that steep declines in mortality rates have also occurred between ages one and fifteen years. Together, the decreases in infancy and childhood have greatly increased the probability that all children born to a marriage will survive through childhood. In combination with the recent contraction in the spacing of births, this is resulting in families where the children in the household are closer in age, on the average, than in any previous period in the twentieth century and, undoubtedly, in the history of European settlement in New Zealand.

Declines in the rates of maternal deaths around the stage of childbirth did not begin as early as those in infancy and childhood. There were

TABLE 7.7

INFANT MORTALITY RATES IN SELECTED PERIODS FROM 1891-1895

(Deaths of Children under 1 Year per 1000 Live Births)

Period	Male	Female	Period	Male	Female
1891-1895	97	79	1925-1927	41	34
1896-1900	89	73	1934-1938	37	29
1901-1905	83	69	1950-1952	25	20
1906-1910	78	63	1955-1957	23	17
1911-1915	60	48	1960-1962	21	16
1921-1922	50	39	1965-1967	20	14

Source: New Zealand Official Life Tables.

TABLE 7.8

CHILDHOOD MORTALITY LEVELS AT SELECTED DATES FROM 1890

(Number of Deaths Expected between Ages 1 and 15 Years per 1000 Children Alive on Their First Birthday, by Year of Birth)

Year of Birth	Male	Female
Ca. 1890	54	50
1910	34	32
1930	22	16
1950	11	8
1960	9	6

Source: New Zealand Official Life Tables used in longitudinal form. For example, for children born in 1890, survival rates from exact age 1 to exact age 5 were calculated from $_1l_x$ columns of the Life Table for 1891-1895, survival rates for age 5 to 10, from the Life Tables for 1896-1900, and those for 10-15, from the Table for 1901-1905. Survival rates for children born at the later dates were calculated in similar fashion.

wide fluctuations in the rate over the century, but the mode remained between four and five maternal deaths per 1000 live births until the late 1930s when a sharp reduction in the rate commenced, as shown in Table 7.9, below.

(See Table 7.9 on page 142a)

It is highly probable that the initial decline in the rate after 1938 was related to the introduction of Maternity Benefits in 1939. These provided for free services from a medical practitioner during pregnancy and confinement and free hospitalization at a public maternity hospital during confinement. The influence of the Maternity Benefits was reinforced, late in 1941, by the introduction of a General Medical Services program, providing for general medical consultations, in some cases entirely free, in others, for a small fee which supplemented a Social Security Fund payment to doctors for each consultation. Influenced by improved medical services and the spread of antibiotics, the maternal death rate continued to decline throughout the 1940s and another sharp decrease took place in 1947. Some medical authorities have suggested that this particular decrease was due to the increased availability of doctors following demobilization after World War II. As Table 7.9 indicates, the rate has been very low in recent years, ranging between two and three maternal deaths per 10,000 live births. Declines in the rate since the 1930s have had a significant effect in reducing the proportion of families deprived of a wife and mother when she is needed most.

Improvements in life expectancy at adult ages have been much less than those in infancy and childhood. Further, they have slowed down since about 1940 and no gains have been made in very recent years. The effects of changes in adult mortality rates on the length and timing of some stages in the family life cycle are shown in Table 7.10, below, averages being calculated according to the mortality rates experienced by a birth cohort as it aged.

TABLE 7.9

MATERNAL DEATH RATES FROM COMPLICATIONS OF PREGNANCY, CHILDBIRTH AND THE PUERPERIUM AT SELECTED DATES FROM 1905

(Number of Maternal Deaths per 1000 Live Births)

Year	Rate	Year	Rate	Year	Rate
1905	4.2	1941	3.4	1950	0.9
1915	4.7	1942	2.5	1951	0.7
1925	4.7	1943	2.2	1952	0.7
1935[1]	4.2	1944	2.7	1953	0.5
1936	3.7	1945	2.2	1954	0.5
1937	3.6	1946	2.1	1955[1]	0.4
1938	4.1	1947	1.1	1965	0.2
1939	3.6	1948	1.3	1966	0.3
1940	3.0	1949	1.0	1967	0.2

Source: Reports on the Medical Statistics of New Zealand.

[1]Rates are given for each calendar year between the dates underlined, to detail the decrease in maternal mortality.

(See Table 7.10, page 143a)

As Column 3 in Table 7.10 indicates, wives from birth cohort 1936-1941 are likely to be about six years older, on the average, than were those in cohort 1966-1871 at the dissolution of marriage by the death of one of the marriage partners. It can be seen that practically all the increase occurred between the marriages of the 1866-1871 and 1906-1911 birth cohorts. The lack of change in more recent years is explained by the levelling off of increases in life expectancies, and the decrease in average age at marriage, which has meant the earlier exposure of a marriage partner to the risk of death.

The average length of marriage has risen consistently over the period; the most recent birth cohorts can expect a duration of about ten years longer than the earliest cohort. Increase in the marriage durations of cohorts 1866-1901 was mainly due to improved life expectancy, but the gains for subsequent cohorts should result almost entirely from the trend to younger marriage.

The average age of wife at death has increased by about six years and she is a little over three years older at the death of her husband. The latter reflects the greater improvement in female than male mortality rates. Wives are surviving, and will survive, their husbands for longer, on the average, although the potential increase will be somewhat modified by the contraction of the age-gap between husband and wife, especially in the case of birth cohorts reaching marriage ages since World War II.

This section has documented the decreases in infant and childhood mortality rates which have strengthened the expectation that all children in a family will survive to adulthood. Maternal mortality rates were shown

to have decreased sharply over the past thirty years. Average age of wife at the death of either marriage partner has risen over the century, but is not expected to change significantly between that of birth cohort 1906-1911 and that of cohort 1936-1941. Average length of marriage has increased consistently, due partly to declining mortality rates and partly to the trend to younger marriage. A wife is outliving her husband for longer, on the average, but future increases in the average length of widowhood will be modified by a contraction in the average age difference between husband and wife, particularly marked in the marriages since World War II.

These findings will be further discussed in Chapter VIII as they are woven into a general description of changes in the timing of the New Zealand family life-cycle.

TABLE 7.10

(a) MEDIAN AGE OF WIVES AT DEATH OF ONE SPOUSE, DEATH OF HUSBAND AND OWN DEATH. (b) EFFECT OF (a) ON MEDIAN DURATION OF MARRIAGE AND ON TIME WIFE OUTLIVES HUSBAND, BY BIRTH COHORTS, 1866-1871 TO 1936-1941

1	2	3	4	5	6	7
Birth Cohort, Wife (April to April)	A. Years				B. Years	
	Mean Age at 1st Marriage (Female)	Median Age of Wife at Death of: 1 Spouse	Husband	Wife	Median Duration of Marriage	Median of Years Wife Outlives Husband
1866-1871	25.6	60.5	67.3	73.3	34.9	6.0
1876-1881	26.3	62.5	68.7	75.8	36.2	7.1
1886-1891	25.6	63.6	69.1	76.4	38.0	7.3
1896-1901	25.2	64.9	69.3	77.6	39.7	8.3
1906-1911	25.5	66.6	70.4	78.9	41.1	8.5
1916-1921	24.4	66.7	70.4	79.2	42.3	8.8
1926-1931	23.1	66.4	70.1	79.0	43.3	8.9
1936-1941	22.4	66.8	70.5	79.2	44.4	8.7

Notes on Table: The median ages of wife at death of one spouse apply to couples where the wife was first married at the mean age for each cohort, as shown in Table 2.1, above. Mean age at marriage of husband in the same time period was taken as the average of the male mean age in the same birth cohort as the wife and that in the previous birth cohort, producing an average age gap between husband and wife declining from 4.0 to 3.1 years over the period. Medians were calculated from joint survival rates for husband and wife prepared from Official Life Tables for non-Maori males and females, for successive years. For instance, women born between 1866 and 1871 and who first married at a mean age of 25.6 years were assumed to have experienced the survival rates (lx column) of the female life table for 1891-1895, as they aged from 25.6 to 30.6 years, then the survival rates shown in the 1896-1900 lif table as they aged from 30.6 to 35.6 years, and so forth. Survival rates for men were calculated in the same way and the product of the male and female rates became the probability of joint survival of husband and wife. These probabilities were used to calculate a distribution of couples surviving to the end of each five-year period since marriage. The figures shown in the table are the medians of these distributions expressed in terms of the age of wife.

The median age of wife at the death of her husband and her own death were calculated in the same way. These medians disregard the prior death of a spouse. The following conditions applied:

(a) All marriages were assumed to be broken by the death of a marriage partner. No allowance was made for divorce.
(b) Independence of the death probabilities for husband and wife was assumed.
(c) No allowance was made for differential mortality by marital status.
(d) Mortality rates were not projected. Survival rates for future years were based on Life Tables for 1965-1967.

The methods used are described in Paul C. Glick and Robert Parker, Jr., "New Approaches in Studying the Life Cycle of the Family," Demography 2 (1965): 194-95.

CHAPTER VIII

CONCLUSION: CHANGES IN THE STRUCTURE OF THE NEW ZEALAND FAMILY

The foregoing chapters have described trends in the formation, growth and dissolution of the New Zealand nuclear family and have offered some explanation for the changes. Trends in marriage patterns, average family size, family-size variation, timing and spacing of births, time at which children leave the parental home, and marital dissolution through divorce or mortality, have been discussed as separate aspects of family history. A remaining step is to link together the family formation patterns of each birth cohort and, by comparing the patterns of successive cohorts, to discover long-term trends in family structure. This is undertaken in the first section of the chapter and is followed by a brief assessment of the potential use of these data for other types of family research. The second section summarizes findings on reasons for changes in family patterns in terms of the outline of New Zealand development given in Chapter I.

Description of Changes in Family Structure

The diagram, below, illustrates the effects of changes in marriage, fertility and mortality rates on the average timing of significant events in the family life cycle from that of birth cohort 1866-1871 to that of 1921-1926. The events mark the beginning and end of recognizable stages in family life; period before the birth of children, the child-bearing and child-rearing stages, continuation of child-rearing with family completed,

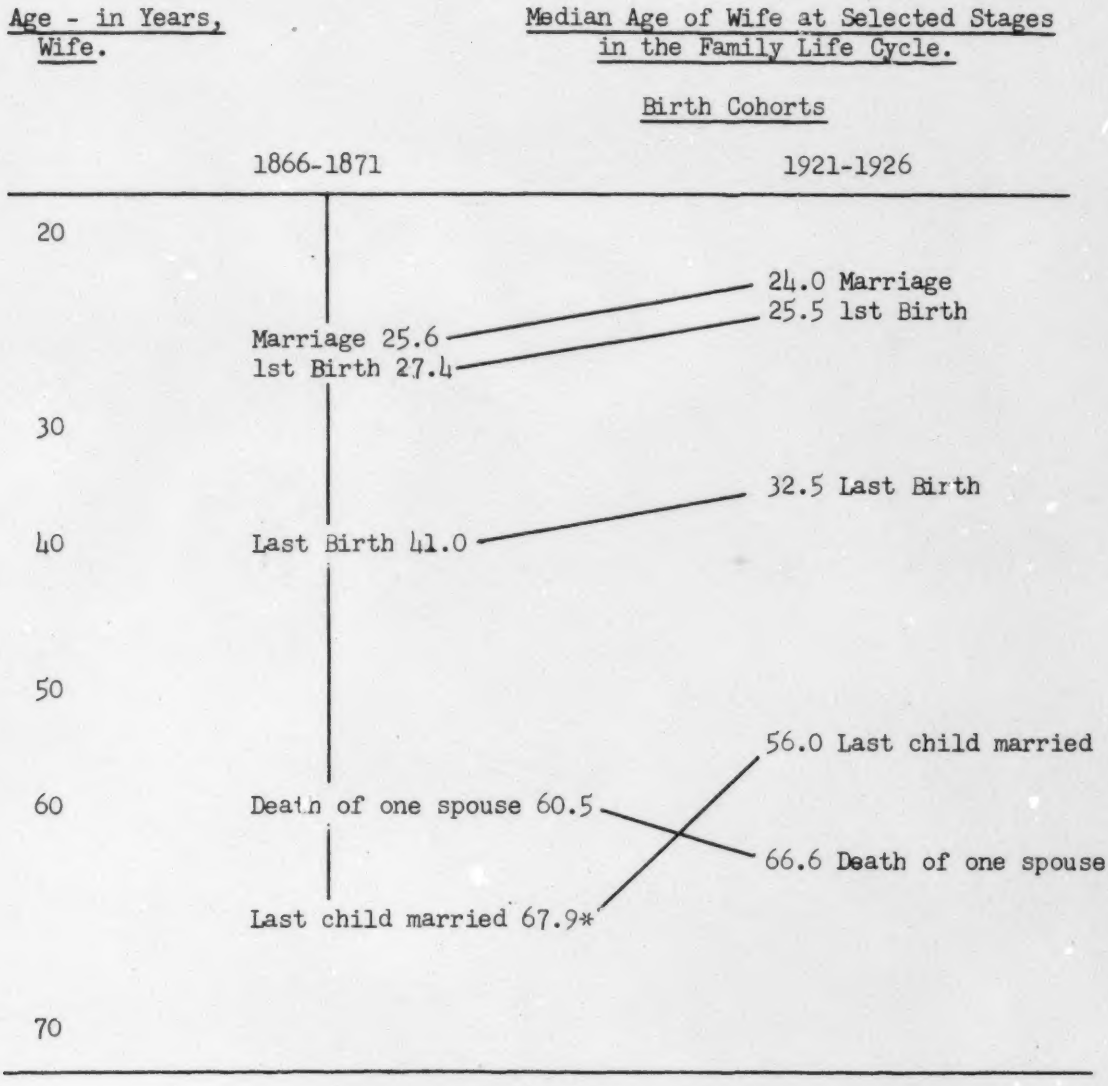
period of life for husband and wife together after all children have left home and, finally, average length of widowhood. Table 8.1 details and explains the calculation of the figures on which the diagram was based in terms of average age of wife at important points in the family life cycle, while Table 8.2 presents a rearrangement of the figures in terms of the average length of the selected stages.

(See Diagram, page 146a)
(See Table 8.1, page 146b)
(See Table 8.2, page 146c)

Definite changes in the timing of events and stages in the nuclear family life cycle are shown in the computations, above. Overall, the cycle is beginning earlier, the brides from birth cohort 1936-1941 being 3.2 years younger, on the average, than those from the 1866-1876 birth cohorts. The greatest decline in marriage age, however, has occurred since 1940. The male trend has been similar to the female in broad outline, but the decline in marriage age has been greater, an estimated 4.4 years between males born in 1866-1871 and those born in 1936-1941. The sharper decrease in male marriage age has been associated with a contraction in the average age difference between husband and wife, particularly marked since World War II.

The decline in the average age of a mother at the birth of her first child has been broadly commensurate with the fall in female marriage age. There have been no dramatic changes in the average duration of marriage before first birth. The interval has varied from 1.5 to 2 years, tending towards the longer duration in birth cohorts whose marriages took place during adverse economic conditions. It is interesting to note, however, that the most recent lengthening of the average interval between births was

Diagram: The New Zealand Family Life Cycle. A Comparison of the Average Timing in Two Female Birth Cohorts.



* After dissolution of parental marriage.

TABLE 8.1

MEDIAN AGES OF WOMEN AT SELECTED STAGES OF THE FAMILY LIFE CYCLE BY FEMALE BIRTH COHORT

1 Birth Cohort (Circa April to April)	Median Ages (Years) of Women at: 2 First Marriage	3 First Birth	4 Last Birth	5 1st Marriage of Last Child	6 Death of 1 Spouse	7 Death of Husband	8 Death of Wife
1866-71	25.6	27.4	41.0	67.9	60.5	67.3	73.3
1871-76	26.4	28.2	41.1	67.5	61.5	68.0	74.6
1876-81	26.3	28.0	40.2	65.9	62.5	68.7	75.8
1881-86	25.8	27.8	38.0	63.3	63.1	68.9	76.1
1886-91	25.6	27.3	35.8	60.8	63.6	69.1	76.4
1891-96	25.3	27.0	34.5	59.6	64.3	69.2	77.0
1896-1901	25.2	26.9	33.7	57.9	64.9	69.3	77.6
1901-06	25.5	27.5	34.7	58.6	65.7	69.9	78.3
1906-11	25.5	27.4	35.4	59.0	66.6	70.4	78.9
1911-16	25.2[1]	26.9	33.9	57.5[2]	66.6	70.4	79.1
1916-21	24.4	26.0	33.8	57.1)	66.7	70.4	79.2
1921-26	24.0	25.5	32.5[1]	57.6) 55.8) 56.3)	66.6	70.3	79.1
1926-31	23.1	24.8[1]	31.8	N.A.	66.4	70.1	79.0
1931-36	22.6	24.5	30.9	N.A.	66.6	70.3	79.1
1936-41	22.4	24.3	30.7	N.A.	66.8	70.5	79.2

Sources and Notes: Columns 2 and 6-8 derived from New Zealand Official Statistics. Methods of calculation described in Chapters 2 and 7, respectively. Column 3 derived from Family Survey data for women with issue. Column 4 derived from average intervals between births as found in the Family Survey and National statistics on average number of births to women with issue, by marriage cohort. As last child may be male or female, an average male and female age at first marriage was used.

Columns 3-5 are based on approximations. (a) A combination of sources is used. (b) Measures of the average length of an interval are added to mean age at one event to estimate median age at subsequent event. Consequently, the figures in these columns may be regarded as reasonable approximations rather than exact measures.

[1]Medians below lines projected on partial experience.

[2]Medians below lines projected on alternate assumptions as follows: in the 1970s, marriage age will (a) decline for females and remain constant for males, or, (b) remain constant for females and increase for males. Assumptions based on assessment of probable future changes in average age at marriage, Chapter 2.

TABLE 8.2

MEDIAN NUMBER OF YEARS BETWEEN SELECTED EVENTS IN THE FAMILY LIFE CYCLE, BY FEMALE BIRTH COHORT.

Birth Cohort [1]	Marriage to Last Birth	1st Marriage of Last Child to Death of 1 Spouse	1st Marriage to Death of 1 Spouse	Wife Outlives Husband
1866-71	15.4	-7.4	34.9	6.0
1876-81	13.9	-3.4	36.2	7.1
1886-91	10.2	2.8	38.0	7.3
1896-1901	8.5	7.0	39.7	8.3
1906-11	9.9	7.6	41.1	8.5
1916-21	9.4	9.1-9.6	42.3	8.8
1926-31	8.7	N.A.	43.3	8.9
1936-41	8.3	N.A.	44.4	8.7

Sources: As in Table 8.1.

a response to expanded economic opportunity rather than economic recession, and, further, that the lengthening occurred despite an increase in the proportion of pregnant brides (Chapter II), indicating that other wives have tended to delay first births even longer than the average increase in interval suggests.

There has been a marked decline in the average age of a mother at the time of her last birth. The decline amongst wives from the 1866 to the 1901 birth cohorts was almost entirely due to a reduction in number of births. A temporary rise in average age at last birth occurred amongst wives from birth cohorts 1901-1906 and 1906-1911, whose marriages were concentrated in the later 1920s and earlier 1930s. The family patterns of these cohorts showed slight deviations in a number of ways from those of previous cohorts, the relevant aspects here being a slightly older marriage age and a longer interval between births. The decline in age of mother at last birth resumed with the birth cohort of 1911-1916 and continued to that of 1926-1931, in spite of an increase in completed family sizes. The trend resulted from a substantial lowering of the average age at marriage and a contraction of the average interval between births. The decline is expected to continue with the birth cohorts of 1931-1936 and 1936-1941 as marriage age has continued to fall, and slight decreases in completed family sizes and a continuation of the contraction of intervals between births are projected. Overall, wives born in 1936-1941 are likely to be more than 10 years younger, on the average, than those born in 1866-1871 at the time they have their last child. The associated contraction of the child-bearing period is indicated in Table 8.2. It is estimated that the average length of the child-bearing stage in the marriages of members of the 1936-1941 birth cohort will be little more than half of those of the 1866-1871 cohort, 8.3 years as compared to 15.4. An important consequence is a considerable shortening of the child-rearing stage.

In research on the timing of the family life cycle, the marriage of the last child has commonly been taken to represent the beginning of the period where husband and wife again comprise the complete household unit, the "empty nest" stage.[1] This is a reasonable assumption for New Zealand where, on the one hand, it has been uncommon for married children to live with their parents (Table 6.8) and, on the other hand, little tendency has been shown for children to leave home permanently before a typical marriage age (Table 6.7). This assumption is relevant to a consideration of changes in the composition of the family as it nears the end of its life cycle. First, the average age of a mother at the time of the marriage of her youngest child has been decreasing, through the trend to a younger marriage age, smaller family sizes and changes in birth spacing. Overall, mothers from birth cohort 1921-1926 are expected to be around 12 years younger, when this event occurs, than those born between 1866 and 1871. Second, as Table 8.2 indicates, marriages of wives from birth cohorts 1866-1871 and 1876-1881 had been ended through the death of one partner, on average of 7.4 and 3.4 years, respectively, before the average time of marriage of the youngest children born to these cohorts. In other words, a usual experience for these couples was to have children living with them to the end of their married lives. Subsequently, the pattern began to change and, in the marriages of the 1916-1921 female birth cohort, an average of more than nine years should remain after the youngest children are married. The cohort patterns are more meaningfully illustrated in the following comparison based on averages: in 31.5 per cent of the marriages where wives had been born between 1866 and 1871, both marriage partners survived to see their youngest child married and could expect a further 6.3 years of married

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[1]For example, Paul C. Glick and Robert Parke, Jr., "New Approaches in Studying the Life Cycle of the Family," Demography 2 (1965): 187-202.

life; 78.7 per cent of the marriages of wives from the 1921-1926 birth cohort are expected to be intact at the time of marriage of the youngest child, and can be expected to survive for another 13.6 years, on the average. Expressed more generally, over twice as many couples in the more recent than the earlier period are expected to see all their children married or established in other households, and they are expected to have more than twice as long to live together after all their children have left home.[2]

Change in the average duration of marriage is the final aspect of the family life cycle to be described. Through an improvement in adult mortality rates, the average age of wife at the time of marriage dissolution, through the death of one marriage partner, has increased by six years. However, a further increase is not expected during this century, mainly because the mortality rates are no longer improving and, to a lesser extent, because of the decline in average age at marriage, which has exposed marital partners to the risk of death at younger ages. The average duration of marriage has risen consistently to the extent that the most recent cohort in this study can expect an average duration of about 10 years longer than the oldest cohort represented. The increase for the earlier cohorts was mainly due to improvements in life expectancy, that for the later cohorts, to a decline in average age at marriage.

Although it is not technically an aspect of the nuclear family life

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[2]It should be noted that these estimates derived from the experiences of birth cohorts give a more realistic assessment than those in a previous model of changes in the New Zealand family life cycle derived by the present writer from cross-sectional data. See: "The Changing New Zealand Family: A Demographic Analysis," in Marriage and the Family in New Zealand, ed. Stewart Houston (Wellington: Sweet and Maxwell, 1970), p. 61. The use of cross-sectional statistics exaggerated the increase in the length of parents' survival after children left home, due mainly to two factors: the use of lower mortality rates than had actually been experienced up to the stage where the last child was expected to marry, and the use of husband's death, instead of that of either spouse as the event which dissolved the marriage.

cycle, it is important for social reasons to note changes in the duration of widowhood. The differential increase in male and female life expectancies is reflected in an increase in the average length of time a wife is expected to survive her husband (Table 8.2). However, the potential increase for the most recent cohorts has been limited by a contraction of the average age difference between husband and wife, and further increases in the average length of widowhood, at least in the near future, are unlikely, as the differential in male/female mortality rates is no longer expanding.

In summary, the changes in the family life cycle, illustrated in the diagram above and detailed in Tables 8.1 and 8.2 were as follows. Women in the most recent birth cohort studied, married about three years younger than those in the earliest, are expected to complete their child-bearing when they are some 10 years younger, to be about six years older when their marriage is ended by the death of a marital partner and they will live about six years longer overall. In terms of the stages in the family life cycle, the child-bearing stage has decreased in length and is expected to be seven years shorter in the youngest than the oldest cohort, marriage duration has increased and is expected to be about 10 years longer in the youngest cohort, the length of time left to husband and wife, together, after their children have left home, should more than double for the most recent cohort and over twice as many marriages should remain unbroken by a death at this stage, and the period of life left to a wife after the death of her husband has increased by an average of two to three years.

Several changes relevant to New Zealand family structure could not be included in the description of life cycle changes and remain to be discussed. The topics are divorce, proportions of the population marrying, and variations in family size.

The effects of changes in divorce rates could have been included in the family life cycle model had New Zealand statistics permitted the calculation of the rates by birth cohort and duration of marriage. The inclusion of the effects of dissolution of marriage through divorce would have modified the timing of the events and stages in the family life cycle to some extent. However, the trends shown are applicable to the great majority of families as divorce affects only a minority. It was estimated on the basis of 1966 age-specific divorce rates that just under 15 per cent of marriages have been ended by divorce in recent years and the percentage was much smaller for the marriages of last century and the earlier part of this.

The proportion of the population who marry, at least once, has increased over the century and is expected to show further increases amongst birth cohorts now at marriageable ages. An illustration of the extent of the change is that 81 per cent of the 1866-1871 male birth cohort had married by age 50 years, while the percentage of the 1941-1946 cohort who are expected to marry by this age is 95. The female percentages in the same birth cohorts are 86 and 97, respectively. There was a decline in the proportion of women marrying towards the end of the nineteenth century and a marked increase in the female proportion began later in this century than that in the male. The latter has increased consistently over the period examined. The marked increase in proportions marrying points to a change in the distribution of household types in society, the nuclear family household becoming increasingly dominant.

Average family size has varied greatly over the period examined. The overall trend has been towards a reduction in the number of children in a family, but some fluctuations have occurred. It is probable that a continuing decline in the average number of births to married women was

experienced from the early years of European settlement in New Zealand until about 1930; the wives in the marriage cohorts of the 1880s had an average of just over six births, those in the 1929 marriage cohort had 2.4. The decreasing average reflected a continuing decline in the proportion of women with a large number of births, the proportion with six or more declining from about 56 per cent of those women who had married between 1880 and 1882 to less than eight per cent of those who married between 1925 and 1929. While the proportion of large families was decreasing, the proportion of women with fewer than two children was increasing, more than doubling between the marriages of the 1880s and the 1920s, to almost 40 per cent of the women married in the later period.

The long decline in average family size stopped with the 1930 marriage cohort and a very gradual increase was maintained by the cohorts of the 1930s and 1940s, suddenly accelerating with the post-World War II marriage cohorts. Marriages for several years after the war produced a larger average family size than that produced by any other marriage cohort since 1920. The increase occurred through a decline in the proportion of women with fewer than two children, a tendency to have the higher number of children within the popular two-to-four range, together with a slight increase in the proportion with large families. However, there was certainly no indication of a return to the much higher percentage of large families found in the last century and the earlier part of this.

Stated intentions of members of marriage cohorts more recent than mid-1952, who were interviewed in the family survey, suggest that the family size of marriage cohorts 1952-1967 will decline slightly from the 3.0 children of the 1947-1952 cohort to an average of around 2.8. A continued decrease in the proportion of families with fewer than two children is expected

but a potential increase in the average from this source is expected to be more than cancelled by a further reduction in the proportion of families of more than four children.

Over the century, then, there has been a substantial reduction in the proportion of large families; six or more children. As far as can be ascertained, there was also an increase in the proportion of married women with fewer than two children, amongst the marriage cohorts of the first thirty years of this century. Since that time, variations in family size have tended to lessen in two ways: through further reductions in the proportion of large families and also of families with fewer than two children. There has been an increasing tendency for women to have between two and four births and, at present, family-size norms and actual family sizes are firmly focused on this range.

An examination of trends in the family sizes of selected social sub-groupings in the population revealed the differences in average family sizes according to the rural or urban childhood residence of present city dwellers; differences had existed by socio-economic and by migrant status, but these had virtually disappeared; differences by Catholic/Protestant religious denomination, age at marriage and urban-rural residence were still present, but had contracted to a significant extent, while differences according to a wife's employment pattern appeared to be continuing. The overall effect of the changes in the family-size differentials of the various social categories has been to produce greater social uniformity in average family size and family-size distributions.

Comparisons of New Zealand trends in family-size differentials amongst selected social sub-groupings were made with those in Britain, the United States and Australia, where comparable research studies were available.

The comparisons showed that, although most differentials had been reduced in all these countries, the New Zealand declines had tended to take place earlier and more rapidly than those in Britain and the United States, except for that related to rural/urban residence. Further, one significant differential in the United States, that between urban dwellers divided according to whether they had been brought up in the country or the town, had not existed in New Zealand at any time over the past thirty years.

Although a knowledge of the trends outlined may be used for a variety of purposes, the main aim in undertaking this demographic analysis was to provide information on a basic component of most types of research on the family and social change. As stated earlier, the study has not attempted to trace the contribution of demographic to other social change in any detail; but, as an aid to future research, it is proposed to specify some theoretical linkages between the two and to suggest actual or potential changes in society and family life to which family-related demographic change has made, or could make, some contribution.

The changes which have occurred in family structure reflect the way in which successive groups have modified family formation behavior in response to the changing constraints and opportunities of the social environment. The modified family formation patterns and the changes in family structure which they have determined have, in turn, laid a basis for changes in family roles and relationships, in the extent and type of participation outside the home of those in the various family positions, and in the functions of the family unit in society. In other words, changes in family structure have provided new conditions under which changes in family life and a redistribution of functions between the family unit and the wider society could occur.

To analyze the processes through which changes in family structure

provide a potential for social change, changes in the timing of the family life cycle can be divided into two types. First, there are the changes in the ages of parents and children already born when further important family events take place. These events, such as the birth of a child or the departure of children from the home, necessitate family reorganization and redefinition of relationships. The new pattern of organization may encourage a greater or lesser participation of some family members in activities outside the home, the type and amount of the participation being influenced by age at the occurrence of the precipitating event. The allocation of time between the home and other activities may lead to further family reorganization and, conceivably, to the allocation of some traditional family functions to outside agencies, or vice versa. The second type of change is that in the length of the characteristic stages in the family life cycle which, together with age on entering the stage, can influence the choice of activities within it. For instance, a stage which has lengthened considerably, such as the period of life after child-care responsibilities have greatly diminished, has been associated with the greater participation of mothers in economic activities and in society generally. Choice of activities tends to be made within the confines of current social acceptability; but, if a certain stage continues to expand over time, the structural change may become increasingly instrumental in influencing a redefinition of social norms concerning the behavior appropriate at this stage of life. Consequently, a study of family structure, which shows long-term trends and offers an assessment of potential future changes, offers the best basis for the exploration of other social change.

The discussion to this point has related to changes in the timing of the nuclear family life cycle. However, other family-related demographic changes not so directly related to the timing of events, such as the proportion of the population marrying and family-size distributions, are also stimulated by, and influence, social change.

Some specific examples of changes in society and in family life, to which changes in family formation, growth and dissolution have made a contribution, are listed in tabular form, below. An examination of the suggested links between demographic and other social change makes it quite apparent that the former are rarely the main precipitants of social change. However, their influence is interwoven with that of changes in other social phenomena and must be taken into account if a complete understanding of social change is to be attained.

(See Table 8.3, pages 156a and 156b)

Social and Demographic Influences on Family Formation Patterns

The analyses of family formation patterns have shown that significant changes in trends have occurred in two main periods. These were the periods during which New Zealand society was clearly emerging from colonial status, and when the main bases for a modern centralized society with a strong welfare orientation were being built. Trends in family-formation patterns conformed to the emerging societal directions. During the earlier transitional period, the average marriage age of both men and women began to increase, reaching its highest point with the cohorts marrying around 1900. Average family sizes had commenced a decline with the families of the couples married in the 1880s, a decline which was to continue until the marriages of 1929. The increase in marriage age and decrease in family size marked a real change in family-formation patterns. No other major change of direction occurred until the period around World War II, when average marriage age began to decline rapidly, family size to increase, and intervals between births to contract. Other major changes in family patterns, resulting from an increase in life expectancy, were not as closely linked with definite phases of social development as were marriage age, family size and birth spacing. While some correlations

TABLE 8.3

SOME EXAMPLES OF THE LINKAGES BETWEEN DEMOGRAPHIC AND OTHER SOCIAL CHANGE

	Social Change	Contributory Changes in Family Formation Patterns or Family Structure
	Changes in Society	
1.	Pressure on housing leading to rapid suburbanization.	Trend to a younger marriage and increase in proportions marrying (in a society where neo-local residence is normal).
2.	Redistribution of responsibility for care and financial support of the aged between families and outside agencies.	Increase in proportions marrying. (Fewer single relatives to adopt responsibility.) Increase in sex differential in mortality rates resulting in a greater proportion of older widows.
3.	Marked increase in proportions of married women in labor force.	Earlier marriage. Younger age at completion of child-bearing. Recent lengthening of interval between marriage and first birth. Increase in life expectancy.
4.	Emergence of a definite adolescent culture, then a youth culture in the 1960s.	Exceptionally large birth cohorts following World War II, characterized by larger family sizes and closer spacing of births, fostering stronger sibling relationships and increasing a youth, at the expense of an adult, orientation.
	Changes in Family Life	
5.	Changes in husband-wife relationships: (a) Greater emphasis on companionship. (b) Greater equality in decision-making.	Younger marriage. Lessening of age gap between husband and wife. Greater period of marriage without children at home.
6.	Change in types of parent-child activity.	Younger age at marriage. Earlier completion of child-bearing.
7.	Changes in roles of children and relationships among them.	Contraction of intervals between births. Decrease in infant and childhood mortality rates, reinforcing trend to closer spacing of children.

TABLE 8.3 (continued)

8.	Changes in family organization and relationships because of wife's or mother's greater participation in outside activities, including employment.	Demographic changes allowing greater participation in societal activities, as in 1.
9.	Changes in roles of grandparents.	Changes in the timing of the life cycle, resulting in achievement of the status of grandparent at a younger age.

can be established, for example, the sharp decline in maternal mortality rates in the early 1940s, death rates have tended to decline more evenly, in association with ongoing social, economic and medical advances.

The changes in family-formation patterns which occurred as our colonial society merged into a more distinctively New Zealand one, were changes experienced by all modern nations at various stages of their development. The interesting point about the New Zealand changes is that they took place at an earlier stage of economic development than similar changes in most other modernizing countries. The second set of family-formation changes which began as New Zealand entered a period of prosperity and security were probably more predictable in terms of stage of economic development, extent and spread of economic opportunity and values related to the family.

These points will be expanded within the framework of the time periods used in the introductory outline of New Zealand social development. Special emphasis will be placed on changes in society and family patterns during the transition from one period to the next.

1850 - 1900

Early family patterns in New Zealand were strongly influenced by the social and demographic composition of her settlers. As previously mentioned, the colonists came mainly from Britain or countries of British origin and so they arrived with British ideas of what a family should be like, ideas of when to marry, how many children to have and attitudes to divorce. They found no alternative usable model in the country of their adoption, nor were most settlers looking for one. The colonization of New Zealand resulted from a largely conservative migration; the only major change commonly sought was an improvement in economic rewards, in security and opportunity, and pressures towards this goal did not immediately involve a conscious change in family-formation patterns. Consequently, the tendency was to follow British norms

and practices, as far as these were feasible in the new conditions, and this tendency was reinforced by the direct transference of British Matrimonial law and by the early establishment of the sorts of institutions that had influenced, and were continuing to influence, British family patterns.

The British family, then, provided a model and it tended to be disproportionately the family of the working lower-middle classes from which the majority of nineteenth century colonists derived. Further, the models of the colonists would certainly have varied according to the time of their migration. British norms related to family size must have been changing for some years before a definite decline in family size began in the 1880s, and change in norms and practices continued from that time. Together, the predominance of working-class attitudes and practices and the probability that the models of many New Zealanders had been drawn from a period of relatively high fertility should have resulted in a somewhat larger average family size in New Zealand than in Britain. From as early as New Zealand family size could be estimated, this proved to be the case. Of course, British influences were not the only determinants of family size in New Zealand in the colonial period. Adaptation to different conditions began for each group of settlers as they arrived, and some modifications of British patterns inevitably resulted.

It was earlier suggested that influence from Britain was decreasing towards the end of the century. Although it had not completely disappeared, New Zealand-derived influences were becoming increasingly important. There is little doubt that the clear decline in average family size, beginning with marriage cohorts of the 1880s, was partly influenced by a similar decline in Britain, but it was associated also with changing conditions in New Zealand. One instrumental factor was the growing differential in family size between urban and rural dwellers under conditions of continued urbanization of the population; another was the economic set-back of the 1880s. The fact that

the decline in family size continued over a long period must be attributed more exclusively to further modifications of family-size norms and practices in the light of New Zealand conditions. As pointed out in Chapter I, by the turn of the century, New Zealand was well committed to the economic support of an increasingly urban population, mainly through export earnings from primary production and, further, was attempting to achieve the living standards and provide the services generally associated with more highly industrialized countries. The relatively high socio-economic expectations of New Zealanders, under these economic conditions, encouraged a further restriction of family size in the earlier part of the new century.

To this point, the focus has been on social influences on family patterns and it is now necessary to return to an earlier period to examine demographic influences. The nineteenth-century migrant groups, dominated by relatively young men, ensured that the population would be heavily weighted in favor of males throughout most of the century. Any attempt to adhere to "normal" British marriage patterns was therefore constrained by an abnormal sex ratio. The marriage patterns prior to the 1890s have not been statistically measured in this study. However, it is possible to make some deductions about them. It was shown that the average age of both men and women at marriage was increasing by the 1890s. In contrast, the proportion of males who married was increasing and the proportion of females, decreasing, towards the end of the century. This suggests that, under the constraints of the sex composition earlier in the century, most women married and at a fairly young age, while, although a large proportion of men did not marry, the average marriage age of those who did was not particularly high, in fact, it increased towards the end of the colonial period. These deductions about the nature of marriage patterns in the early years of settlement are both demographically and social credible. Demographically, a previous excess of males could lead

to a high marriage age, resulting from the marriage of older men as sex proportions equalized, but this effect would not have been experienced in New Zealand to any extent until a significant levelling out of the sex ratio occurred, towards the end of the nineteenth century. A continuing high male ratio is more likely to reduce the proportions marrying than affect marriage age and there was certainly a large proportion of unmarried men in colonial New Zealand. Socially, in New Zealand, as in other frontier societies, there were some types of almost entirely male communities, such as the gold fields and some other mining areas, where marriage was uncommon and many men, accustomed to living in a succession of such places, never married. The same was often true of men in geographically-isolated occupations. As the country became more settled, transportation improved and the proportions of men and women became more even, male marriage rates increased. On the other hand, towards the end of the century, marriage age began to rise and stabilized at an average higher than that in Britain at the turn of the century. The rise was probably a response to the depression in the 1880s, as well as to the effects of the equalizing of the sex ratio, as have been described. The higher marriage age was sustained well into the twentieth century.

During the early colonial period, then, marriage age was relatively young, but fell into Hajinal's classification of a "European marriage age" (Chapter II). The average number of births to married women was well over six. These patterns were part of our inheritance from Victorian England. Divorce was uncommon, due to the attitudes of colonists arriving from a low-divorce society and to the transference of laws under which divorce was granted only under highly restricted grounds. A typical family could expect at least one infant death and the death of a child between one and fifteen years was only a little less likely.

Towards the end of the century, family patterns began to change,

marriage age to rise, family size to fall, divorce became slightly less uncommon and mortality rates continued a gradual decline. It is likely that trends in Britain were still exerting some influence on family patterns, but the major influences by this time were undoubtedly the changing social attitudes and socio-economic conditions within New Zealand.

1900 - 1940

The marked decline in family size in this period took place at an earlier stage of industrial development than that characteristic of most urbanizing societies. New Zealand was just beginning a transition from a rural to an urban population majority and experiencing a slow build-up of urban industry, in the early stages of the prolonged decline in family size. At this stage of economic advance most European countries, including Britain, were experiencing declining death rates but stable birth rates. The explanation of the difference arises from New Zealand's colonial origins. It has already been suggested that the decline in family size, commencing in the 1880s, was greatly influenced by that in Britain and so took place at a similar time rather than at a similar stage in economic development. Its continuance showed the ability of New Zealanders to modify family-formation strategies in an attempt to satisfy aspirations for good living standards, under the constraints of limited economic resources rather than the constraints of an advanced type of economic organization, as in Britain and the United States. The decrease in family size was achieved through relatively late marriage, through a limited number of chiefly male contraceptive measures and, later in the period, through the use of more effective and predominantly female contraceptive methods. It is probable that the greater control over fertility was linked reflexively with the rising status of women. Objective evidence of the rise was their achievement of voting rights and acceptance in institutions of higher learning in the 1890s and, in 1919, of eligibility for

Parliamentary membership. As more opportunities opened up for women, it became less convincing to define them as simply wives and mothers; the possibilities and advantages of family-size control became more apparent and successful restriction of births, in turn, prompted a further rise in women's status.

A contributory reason for a reduction in the number of births in a family, as a society modernizes, is a decrease in infant and childhood mortality rates, which reduces the number of births required to achieve an "ideal" family size. It would be fanciful to suggest that New Zealanders, at any stage, were having large numbers of births to ensure that one or two children in a family survived to adulthood, a reason frequently advanced for the large number of births per woman in underdeveloped countries. However, it is possible that decrease in mortality rates during this period influenced the decline in the number of births per woman to the extent that fewer experienced the death of a child, whose loss they attempted to mitigate through an additional birth.

Average family size is unlikely to have declined as far as it did in this period had not the economic depression of the later 1920s and early 1930s influenced the pattern of child-bearing. The marked extension of the average interval between births to wives in the child-bearing ages at this time suggests that attempts were made to achieve "normal" family sizes, but it is likely that many, especially those who married in the second half of the 1920s, had smaller families than they would have considered ideal in better economic circumstances.

Average marriage age changed little during this period. A tendency towards younger age at marriage was interrupted by the effects of World War I and later economic depression. The average age was relatively high, 28-29 years for men and 25-26 years for women. This, again, reflects responses to

limitations of economic opportunity reinforced by the strong social expectation that a man should be able to provide financially for a family before he entered marriage. The effects of the low male marriage rates in an earlier period were still influencing one aspect of marriage in this period; the relatively large pool of older, unmarried men resulted in a large proportion of marriages where a wife was much younger than her husband. The effect was diminishing, however, this study documenting a decline in the proportion of such marriages from 1916. The continuing increase in the proportion of men who married evidenced a country which has become established, with a consequent numerical and geographic balancing of the sex ratio.

Mortality rates continued to decrease, especially at young ages, through improvements in living standards, health care, education and medicine. Divorce rates, on the other hand, showed a fluctuating increase, rising sharply in response to expansion in the legal grounds of divorce and to the effects of husband-wife separations in World War I.

Families in this period, then, tended to be established by relatively late marriages. There was a progressive reduction in family size and a comparatively long interval between births, especially over the depression years. Parents were somewhat more likely to experience divorce than in colonial times, had stronger expectations that all their children would survive to adulthood and could expect a longer marriage duration. Further, an increasing proportion of the population was marrying and founding families of procreation.

This was on an aggregate level. There were some differences in family patterns amongst the various social sub-groupings of the population, particularly in family size. However, as would be expected in a society where social differences were small and tending to diminish, social differentials in family formation patterns, never as marked as in societies with a clearer separation

of social strata, with strong ethnic and religious subcultures or with greater local variations in laws, institutions and resources, were tending to contract.

A change in family-formation patterns occurred between the late 1930s and the end of World War II. An improvement in economic conditions after the mid-1930s and accelerating during the war, and the social and economic legislation of the late 1930s, changed the conditions under which families were established. Job security and incomes were increased through the effects of an expanding economy through legislation providing for guaranteed prices for major primary products and for regulation of industry through import selection and exchange controls. A new Government Department of Housing Construction initiated a scheme for the extensive construction of State houses for rental (later for sale to tenants) and the existent State Advances Corporation was mandated to administer long-term housing loans at low interest rates. This government intervention in the housing field alleviated a severe housing shortage and so provided conditions under which marriages could occur sooner than might have otherwise been possible. Social security legislation, designed to eliminate hardship for families and special groups, undoubtedly also had some influence on the increase in marriage rates and family size.

No systematic attempt has been made to rank the relative importance of these influences on the changes in family-formation patterns. It appeared, however, that the general improvement in the economy exerted a stronger influence than the new Social Security provisions on the increase in family size which occurred after World War II. This was deduced from the fact that the greatest increase in family size took place amongst people of higher socio-economic status, those who would have been least affected by the new or increased social-benefit payments. However, it was undoubtedly the improvement in social and economic conditions from all sources that led to the changed family patterns of modern society.

1940 - 1966

The major social trends over this period were economic expansion, rapid population growth, continued urbanization and a further centralization of government functions. Relatively successful attempts to ensure economic opportunity and security, and adequate living standards amongst all sectors of the population, gave New Zealand the image of a Welfare State. These were developments which influenced some significant changes in family-formation patterns.

The decline in marriage age was undoubtedly the sharpest change. It has been argued in this study that younger marriage resulted from a lessening of social and economic constraints, the argument depending on the assumption that, given favourable conditions, most people prefer to marry early. A positive correlation between the decline in marriage age and the reduction of socio-economic obstacles to early marriage was demonstrated in Chapter II. It appeared that conditions of full employment and improved initial salaries and wages contributed towards the reduction of average age at marriage. But, even more important, the high demand for labour associated with an expanding and urbanizing economy and the relatively small proportion of the population in the work-force ages, due to the low birth rate over the late 1920s to mid-1930s, led to increased employment opportunities for women. The increase in the demand for female labour was greatest in the larger cities, where the largest expansion in secondary and tertiary industries occurred. The larger cities also attracted the majority of internal and overseas migrants, mainly for these economic reasons. In short, more female employment was available in the larger urban areas and a greater proportion of the population was living in these areas where the availability of employment had increased. The expanded demand for female labour led to the necessity to employ more married women, since the continuing increases in marriage ratio together with

the relatively small proportion of the population in the working ages had resulted in a relative scarcity of single women of work-force age. As the employment of married women increased, it became more acceptable to employers and to society in general; the availability of jobs for married women, and greater social acceptance of their working, enabled couples to marry younger by establishing their households on the basis of two incomes. What has been described as a sequence was, in reality, a continuing process in the sense that the younger that women married, the greater was the need to employ married women and the more widely their employment became accepted, both consequences encouraging still younger marriage. In urban areas, it became the majority practice to work after marriage before the birth of a child, and it became increasingly common for women to work again after having children. The new pattern of birth timing and spacing emerging in this period, an increasing interval between marriage and first birth, and a contraction of intervals between subsequent births was, therefore, a natural outgrowth of a change in the potential life pattern of a married woman.

Another factor probably associated with the decline in marriage age was the increasing availability of housing. Construction of State houses for rental, and provision of low-interest loans for house purchase, both available to families of limited income, increased the housing stock, releasing a larger amount of the existent housing for occupation by others, including newly-married couples. With a major contribution from the State housing programs, the housing shortage began to ease during the 1950s, and by the mid 1960s, the problem of finding living accomodation, although not necessarily of financing it, was largely overcome.

A long-term trend towards a decrease in average age difference between husband and wife accelerated from the time of World War II. A demographic explanation of the acceleration is based on the increase from the mid-1950s

in the number of women reaching the popular female marriage ages relative to the number of men reaching the prime marriage ages for males. One response to this imbalance was a tendency for a greater proportion of women to marry men closer to their own age than had previously been the pattern. In other words, a girl in 1960 tended to marry the man her younger sister might have married at an earlier period, say the 1920s or 1930s. Female marriage age was still declining and, with the shrinking of the age gap between husband and wife, male marriage age declined even more rapidly. The situation described could not have occurred, of course, had not earlier marriage become socially more acceptable and financially more feasible. The trend could well have been reinforced by a change in social norms relating to age difference between husband and wife. A probable reason for a change in these norms is that companionship between marriage partners appears to have become an increasingly important value in marriage, and it is generally recognized that companionship is likely to be stronger between people near in age, as interests are more likely to be similar, friendships held in common, and age-linked authority, absent.

The recovery in average family size over this period was not surprising in view of the evidence that the vast majority of people felt that the ideal number of children lay in the two-to-four range. As economic conditions improved and marriages took place, or were re-established, after the war, more couples were able to have families in this size range, tending towards the upper limit. Although birth rates were declining gradually from 1962, much of the decrease can be explained by changes in the timing of births. No evidence was found in the family survey to suggest that those married between mid-1952 and 1967 would have substantially smaller completed families, on the average, than those who married between 1947 and 1952, a cohort which had a larger average family size than any other since 1920.

Mortality rates had become relatively low, especially in infancy and childhood. The medical provisions introduced under the Social Security Act of 1938 were certainly an influence on their continued decline. However, it was the maternal death rate around the time of childbirth which responded most dramatically; the rate was halved soon after the new provisions were introduced and by 1965 had fallen to the low point of two maternal deaths per 10,000 live births.

Within society, most differentials in the family-formation patterns of social sub-groupings were continuing to decline, a reflection of an increasing social uniformity in general. It should, however, be noted that family-survey data did not permit a comparison of the mortality rates of the various social sub-groupings. Little research on this topic has been carried out in New Zealand, but a small study of 1952 mortality rates found that neonatal death rates at that time were still higher for those of lower occupational status.[3] While it is likely that mortality differentials have been decreasing, it is improbable that they have completely disappeared.

During this period, then, the emergence of a Welfare State under conditions of economic expansion led to marked changes in family-formation patterns. With the lessening of economic and some social constraints, earlier marriage and an increase in family size were facilitated. The change in family-building patterns conformed to the changing requirements of the economy. A continuing decrease in infant and childhood mortality rates was aided by advances in medicine and the expansion of medical services. Improvements in life expectancy at older ages began to level off and will probably not recur to any significant extent until there is a break-through in the treatment of organic diseases, such as cancer and heart disease, the main causes of death

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[3] Report on the Medical Statistics of New Zealand for the Year 1952 (Wellington: Government Printer, 1955), pp. x-xi.

in the older age groups. Divorce rates have shown a fluctuating increase, with high peaks after World War II and after the conditions under which divorces could be legally granted were extensively liberalized in 1968. Further variations in divorce rates are expected, but with the greater social acceptance of divorce as a method of coping with marriage breakdown and fewer legal difficulties in the way of obtaining a divorce, the overall tendency will be towards an increase.

In this section, the links between major changes in New Zealand society and changes in family-formation patterns have been summarized. It has been shown that family structure began to change as New Zealand society emerged from colonial status with a more balanced population composition and with social attitudes and conditions that had diverged markedly from those in Britain. A second major change in New Zealand society occurred from the late 1930s and early 1940s. Increasing economic prosperity, provision of comprehensive welfare benefits and growth in the scope of National Government activities contributed largely to the change, providing new conditions for family formation and growth which led to significant changes in family structure, for a second time in the history of Europeans in New Zealand. It was noted in the introduction that further important changes have occurred in New Zealand society since 1967. Relatively severe economic difficulties have recurred and both economic and social adjustments have been made in an attempt to meet the new situation. While family patterns have not been described in any detail for this recent period, it is clear that changes in these have occurred, and will continue to occur, to some extent through changes in norms related to family formation and growth, but mainly in the process of compromise between the actualizing of the family norms and adherence to social and economic constraints.

APPENDIX A

FAMILY SURVEY QUESTIONS AND CODING

The following list of questions comprise all those from the Family Survey which were used in the present study. The questions follow the order in which they were asked but have been given consecutive numbers to avoid the gaps left by the omission of unused questions. Each question is accompanied by a listing of the categories according to which it was coded. Asterisked questions were pre-coded, lists of categories and the code number for each being incorporated into the Survey Schedule. The other questions were coded later, in coding boxes printed on the schedule.

Questions	Categories
*1. Were you born in New Zealand? If No, at what stage of your life did you come here to live? Hand subject Card I. Ask same questions for (a) Subject's husband (b) Subject's mother (c) Subject's father	Card I New Zealand born Pre-school School After school, before marriage Came to live but do not know at what stage Did not come here to live Don't know Not stated
*2a. Up to the age of 14 years did you live mainly in the country or the town? If subject states "town," ask: Would you say you lived mainly in a very small country town (under 1000 pop.) or in a larger town or city? Ask this question for subject's husband also.	Urban Rural Cannot determine Overseas Don't know

*3. Are you a European, Maori or a member of another group? And your husband?	European Maori Asian Other (state) Not stated
4. (a) Could you tell me the month and year of your birth? (b) And the month and year of your husband's birth? (c) Could you tell me the year in which your mother was born? (d) And your father's year of birth?	Subject's Age Group 5-year groups, 1882-87 to 1947-52 Subject's Mother's Age Group 5-year groups, before 1873 to 1928-32
5. Could you tell me the month and year in which you were married?	(a) Subject's Marriage Period 5-year groups, 1902-07 to 1962-67 (b) Months and Years used as basis for calculating Marriage to first Birth (c) Age at marriage, husband and wife, coded by subtracting date of birth from date of marriage
*6. Is this your first marriage? And is it your husband's first marriage?	1st marriage both Not 1st marriage--wife Not 1st marriage--husband Both married before Not stated
7. In what year did your parents marry?	Mother's Marriage Period 5-year groups, before 1893 to 1943-47 Year used as a basis for calculating Marriage to last Birth

*8. Was this your parents' first marriage?

1st marriage both
Not 1st marriage--mother
Not 1st marriage--father
Both married before
Don't know
Not stated

*9. If your parents' marriage has been broken by death, divorce or separation, in what year did this happen?

Marriage still intact
Under 5 years' duration
5-9 years' duration
10-14 years' duration
15-19 years' duration
20-24 years' duration
25+ years
Don't know
Not stated

Occupation (Full Descriptions)

10. What is your husband's occupation?

11. Has your husband changed his occupation since your marriage?

If yes, what did he do when you were first married?
And then . . . . . to present?
(Probe for promotion, if necessary. Has the title of his job changed?)

12. What was your father's occupation about the time of your marriage?

(Or before death or retirement, if prior to subject's marriage.)

13. What was your occupation before marriage?

Occupational Categories

Professional and Managerial
Minor Business and Professional
Clerical and Sales
Skilled Manual
Semi-skilled and Unskilled Manual
Student
Domestic
Farming

Female Occupations

Same as above but Clerical and Sales divided into a Higher category, A, and a Lower, B.

*14. (a) Have you had any paid employment since marriage?

(b) If yes to (a), have you worked continuously since marriage?

(c) Have you any children?

A

No work since marriage
Continuous work since marriage
No children--worked sometimes
Before 1st birth
Not before 1st birth, but later
Not stated

B

Pre-school child
Primary School child
Secondary School child
Not till child left school
Not applicable

If subject has children and has not worked continuously since marriage, ask:

(d) Did you work after marriage before you had any children?

(e) Have you worked since you have had children?

(f) If yes to (e): Did you ever work while you had children under school age?

(g) If no to (f): Did you ever work while you had children of primary school age?

(h) If no to (g): Did you ever work while you had children of secondary school age?

15. If subject has engaged in paid employment since marriage.

(a) Have you worked full-time, part-time or both? If both, has this followed any pattern, e.g., first part-time and later full-time work?

The coding of this question used in the present study related to present employment:

Full-time
Part-time
Not working

16. What is the total length of time in which you have had paid employment since your marriage? (to nearest year)

Coded in single years.

17. (a) Did your mother have paid employment during her married life?

(b) If yes to (a): (i) Did she work after marriage before she had any children?

A

No work since marriage
Before 1st birth
Not before 1st birth but later
Worked sometime--no details
Don't know
Not stated

(ii) Did she work at any time after she had children?

(iii) If yes to (ii): Did she ever work while she had children under school age?

(iv) If no to (iii): Did she ever work while she had children at primary school?

(v) If no to (iv): Did she ever work while she had children at secondary school?

B
Pre-school child
Primary School child
Secondary School child
Not till child left school
After had children--no details
Not applicable

18. (a) Are you in paid employment at present?

(b) What is your present occupation?

Categories as in question 13.

19. Income

What is your husband's present income?

Is this before or after taxes?

(Include payment for regular overtime or secondary employment.)

Pounds Sterling

No income
Under 200 per annum
200 - 499
500 - 999
1000 -1499
1500 -1999
2000 -2499
2500 -2999
3000 -3999
4000 -5999
6000+
N.S.

N.B. TAX INCLUDED FOR CODING PURPOSES

*20. Education

How much formal education did you have?

Ask this question also for
(b) Subject's husband
(c) Subject's father
(d) Subject's father-in-law

Primary only
Secondary--under 3 yrs.
Secondary--3 yrs. or more
Part degree
Graduate
Education still continuing
Don't know

*21. Religion

(a) What is your religious denomination?

(b) What is your husband's religious denomination?

Protestant
Catholic
Jewish
Other
Not stated
None

*22. If some religious affiliation stated:

(a) Do you attend church regularly, occasionally, hardly ever, never?

(b) And your husband?

Regular
Occasional
Hardly ever
Never
N.A.

*23. In which religious denomination were you brought up?

Protestant
Catholic
Jewish
Other
None
Not stated

*24. Were you, as a child --

Required to go to church or Sunday School
Encouraged but not made to go
Parents did not mind either way
Discouraged from attending
Not stated

*25. In what denomination are you bringing (or have you brought) your children up?

Coding as in questions 20 and 22.

*26. Children

If subject has children:

Would you tell me the month and year of birth of your children from the oldest to the youngest?

A
Used as basis for assessing interval between marriage and first birth and subsequent births. Coded in 3-month periods.

<u>If subject has stated earlier that she has no children</u>:	
Have you ever had children? Month and year of birth? (Question applies to <u>present marriage</u> and to <u>live births</u> only.)	B Actual number births, coded.
27. Then this is_____ births altogether?	A Check question
28. (a) How many of your children, including adopted, live with you?	Number living at home coded.
(b) How many live elsewhere?	
29. <u>If subject has children living at home</u>:	
(a) How many of your children who are living at home are under school age?	Number in each section of the question, coded.
(b) How many are at primary school?	
(c) How many are at secondary school?	
(d) How many have left school?	
30. <u>All subjects</u>	
(a) Does anybody apart from your husband (and children) live in your household regularly? (i.e., is living with you now and has lived or intends to live for a year or more)	Nuclear family only Parent(s) Married children Other lineal relatives Sibling(s) (and siblings-in-law) Other collateral relatives Mixed relatives and/or others Boarders Paid help Other (state) Not stated
(b) If yes to (a): Who is this?	
31. Then that makes _____ persons living in your household?	Number coded

*32.	What do you think is the ideal number of children for an average couple today?	0 1 1 or 2 2 2 or 3 3 3 or 4 4 4 or 5 5+ Don't know As they come
33.	<u>If subject under 45 (excluding those with only adopted children)</u>: How many children do you, personally, expect to have altogether, including present children? (Most likely)_____	Number coded
34.	<u>All subjects</u> (a) How many children did your mother have altogether? (not adopted) <u>Include all live births whether or not persons are alive now</u>.	Number coded
35.	Any twins or triplets? Number of sets?	Not coded. Included for use in estimating average interval between births.
36.	Can you give me the year of birth of the eldest and youngest of your mother's children? (alternatively, number of years between eldest and youngest)	Used for assessing average birth intervals.
37.	<u>Kinship</u> Which of your relatives or your husband's relatives do you, personally, see most frequently?	Subject's parent or parents Husband's parent or parents Parents--cannot distinguish between subject's and husband's Sons or daughters Other lineal relatives

Subject's siblings
Husband's siblings
Siblings--cannot distinguish between subject's and husband's
Other collateral relatives
Mixed group of relatives given
Have relatives--don't see often enough to warrant answers
Not applicable (none in New Zealand or none around)

*38. How often do you see these relatives?

At least once a day
At least once a week
At least once a month
Several times a year
About once a year
Less than once a year
N.A.

*39. Where do these relatives live?

In same suburb
In other Wgtn. suburb
Could pay a day visit
Could pay an overnight visit
Further away but in New Zealand
Not in New Zealand
N.A.

40. Have you or any member of your immediate family within the past two years:

(a) Had relatives to stay, spent a holiday at a relative's home or gone together with relatives on a holiday trip?

(b) Attended a wedding, birthday or christening party or another major celebration of a relative outside your immediate household?

State (type of celebration)

(c) Attended a gather of relatives at Christmas or some other occasion?

State (type of celebration)

No (a, b, and c)
Yes (a, b, and c)
Yes (a and b)
Yes (a and c)
Yes (b and c)
Yes (a)
Yes (b)
Yes (c)

Subjects with children

To whom would you turn first

*41. If burnt out and family wanted temporary accommodation anywhere in New Zealand?

Neighbour
Friend
Relative
Hotel-Motel
Depends who offered
Don't know

Now I want to ask you some questions about the family in which you were brought up. Can you remember back to the time when your parents had been married about as long as you have been married now?

(a) How many years would this be?

(b) Was your parents' marriage still intact at that time?

Not coded

(Omit following questions if parents' marriage was broken before this.)

42. At this time was there anyone apart from your parents and brothers and sisters living regularly in your household?

If yes: Who was this?

Nuclear family only
Subject's grandparents
Subject's married siblings
Other lineal relatives
Parents' siblings or (siblings-in-law)
Other collateral relatives
Mixed relatives and/or others
Boarder
Paid help
Other
D.K.
N.A. (Respondent not asked the question)

Contraceptive Form

A sheet listing methods of contraception and birth intervals was distributed to a small sample of the respondents and they were asked to check any method of contraception which they had used at any time before first birth, between each birth, separately, and after most recent birth. All women selected, with or without children, were asked to complete the form. There were no refusals.

The following coding was used for each of 5 stages:

1 Before first birth
2 Between first and second births
3 Between second and third births
4 Between third and fourth births
5 After most recent birth

No method (has sometimes used one)
Condom (sheath)
Foam tablets
Jelly or Cream
Diaphragm +/- jelly or cream
Intrauterine device
Pill
Rhythm
Withdrawal
Other (include more than one method)
No method (has never used one)
Not Applicable--has not reached this stage or not part of "contraceptive" sample

APPENDIX B

TECHNICAL NOTES ON STATISTICAL CALCULATIONS

Technical Notes on Calculation of Mean Age at First Marriage and Proportions Marrying

Procedures were as follows:

(a) Calculation of proportions single in each 5-year age group from 15-19 to 50-54 years for males and females separately as at each Census from 1886.

(b) Rearrangement of proportions single according to birth cohort, forming a decreasing series as the cohort aged.

The mean age at first marriage of those marrying by age 50 years was calculated according to the following formula which gives an average of the number of years lived as single persons by those married by age 50, that is, the average age at marriage. If the proportion single at each age is s(x) and the number of marriages at each age x is $-d[s(d)] = n(x)dx$, to calculate the mean age at marriage ($\bar{x}$) of persons marrying between ages d + D:

$$\bar{x} = \frac{\int_d^D x\,n(x)\,dx}{\int_d^D n(x)\,dx} = d + \frac{1}{s(d) - s(D)} \int_d^D [s(x) - s(D)]\,dx$$

$$= d + \frac{1}{s(d) - s(D)} \times \left[\int_d^D s(x)\,dx - (D-d)\, s(D) \right]$$

Notes on Additions and Adjustments to Census Data in Estimating Proportions Single

1. War-time Censuses, 1916 and 1945: In both censuses, the male marital status distributions were distorted by the exclusion of the men in the armed forces, serving overseas. These forces contained a higher proportion of single men than that in the New Zealand population. It follows that unadjusted proportions single from census tabulations would be too low at the ages, 18-39 years, where significant numbers of men were absent on military service.

Proportions were adjusted for the 1916 Census, using marriages registered by age for 1911-15 (inclusive). Those who had married during this period between age group (x) and (x + 5) were subtracted from the number in the relevant age group of single men (x) in 1911, and the result divided by the total in the age group in 1911. This, then, became the proportion single in age group (x + 5) in 1916. As with calculations of proportions single directly from census data, no adjustment was made for mortality. However, it was considered necessary to make an adjustment for migration, although this has not been done in the calculations from censuses. In the census method, the migration assumption was merely that net migrants over the past 5-year period were maritally distributed in the same way as the total population, by the time of the census enumeration. In the Vital Statistics method, if no allowance were made for migration, the assumption would be that none of the registered marriages were to net migrants, an assumption which could not be made during a period of substantial net immigration, like that of 1911-15, when the average yearly gain from excess male arrivals over departures was 3,652. (Report of Population, Migration and Building Statistics)

The proportions of single males calculated from the 1945 Census, were not nearly as distorted as those from the 1916. Conscription for military service had been in force for all males, 18-45 years, single or married, with or without children, since the end of 1942, except for those exempted on grounds of their employment considered essential to the war effort or maintenance of the economy. However, there was certainly some distortion. The 1945 male proportions single could not be adjusted by the methods used for 1916, as there were no detailed marriage statistics compiled for the years 1941-44, inclusive. Adjustments were made through comparisons with the census-derived female proportions single, which were affected relatively little by absences due to war. It was considered unneccessary to adjust the female proportions single for either 1916 or 1945.

2. Proportions single for 1931 and 1941, when no censuses were taken, were calculated from numbers of registered marriages by single years of age from 1926-30 and 1936-40, inclusive, by the method used for calculating the 1916 male proportions single. No adjustments were made for migration during these periods as net migration levels were very low.

3. Projections of Proportions Single: These were made for an increasing number of age groups from birth cohort 1916-21 to 1941-46. Marriage rates between census enumerations were calculated for 5-year age groups, according to the rate at which proportions single were reduced, and trends were inspected. Where a steady increase in rates was found, in at least 5 successive cohorts, the trend to a younger marriage age was continued in the projections. This occurred in only one case, the male marriage rate between ages 20-24 and 25-29 years. In all other cases, fluctuations were found and projected figures were based on the

average of the marriage rates of the two previous cohorts. This assumes that, apart from the exception noted, marriage rates for age group 20-24 and older will remain relatively constant. If this assumption is incorrect, it is likely to be in the direction of assuming higher marriage rates at older marriage ages than will actually occur. It is quite possible that these rates will decline because of the increasing proportions of the population marrying at young ages. If a decline occurs, the average age at first marriage would prove to be even younger than has been estimated for birth cohorts 1921-26 and later, and proportions remaining unmarried would be greater. It seems highly unlikely that first marriage rates at older ages would increase, as the projected proportions of the population marrying by age 50 years, especially in birth cohort 1941-46, were so low, according to the assumption of constant marriage rates by age, that it is most improbable that they would be reduced much further.

Possible Sources of Error in Marriage Rates Calculated from Proportions Single

1. Timing of Censuses: In these calculations by cohort, the assumption is made that the people in each 5-year age group at a census enumeration will be exactly five years older at the time when the next census is taken. This is not entirely true, in fact. In New Zealand, census enumerations used have usually taken place in March or April and the time between censuses has ranged between 4.93 and 5.08 years. The error that this would introduce is insignificant, but the two exceptions to the custom of taking censuses around the end of the first quarter of the year (1916 Census, 15 October and 1945 Census, 25 September), misplacing the age groups by 6 months in each case, could have distorted the proportions single. However, after examining the marriage rates by age around these two periods and finding no sudden variations, it was

decided to take the adjusted proportions single (Note 1, above) to represent those at the end of the first quarter in 1916 and 1946, respectively.

2. The Effects of Differential Mortality on Proportions Single: The rate of decline in the proportion single from one age group to the next can be affected by mortality and migration as well as by marriage. Because of a lack of adequate statistics on migration, it has not been possible to assess its influence. However, some indication can be given of the probable direction and extent of any errors introduced into the calculated marriage rates by failure to correct for the influence of differential mortality.

The mortality rates in the single population tend to be higher than those in the total, which has the effect of increasing the apparent number of marriages in a cohort. Reduction of the proportion single, due to the differential in single and total mortality, if attributed to marriage, results in a slight over-estimate of proportions marrying. There is a further effect. Because the differential applies mainly at older ages, the extra marriages appear to have occurred at a relatively late age, possibly increasing the average age at first marriage as calculated from census proportions single. In New Zealand, as in several European countries where statistics have been available to calculate mortality rates by age and marital status, the effect of mortality selection on proportions single has been greater for men than for women and it appears to have been decreasing for both sexes over the century.[1]

3. These points are illustrated for New Zealand in the following Table.

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[1]John Hajnal, "Age at Marriage and Proportion Marrying," Population Studies 7 (1953-54): 127.

RATIO OF SURVIVORS IN A LIFE TABLE FOR SINGLE PERSONS TO SURVIVORS IN A LIFE TABLE FOR THE TOTAL NON-MAORI POPULATION

Age Groups	1926		1955-57	
	Male	Female	Male	Female
21 - 24	1.00	1.00	1.00	1.00
25 - 29	0.99	1.00	1.00	1.00
30 - 34	0.99	1.00	0.99	1.00
35 - 39	0.99	1.00	0.99	1.00
40 - 44	0.98	1.00	0.99	1.00
45 - 49	0.98	1.00	0.99	1.00
50 - 54	0.96	0.99	0.99	1.00

Sources: 1955-57 life tables for male and female Non-Maori population - Official Life Tables, 1955-57. Other life tables calculated for this study.

Assuming that the 1926 schedule would "fit" a birth cohort which had reached the middle age group in the range given in this table, that is, the 1891-96 birth cohort, its male proportions single were corrected for mortality by dividing them by the ratios in Column 1. The average age at first marriage calculated from the revised proportions was unchanged at 28.7 years and the proportion still single by age group 45-49 became 13.2 instead of 12.9. The effect of the selective mortality did not appear to be very great. It was not corrected for, partly because of this and partly because it was considered that, while the influence of selective migration could not be adequately assessed, it was likely to have operated in the opposite direction to that of mortality.

4. Age Misstatement

In the earlier answers used in this study, particularly, there

was some obvious misreporting of ages. The latter varied somewhat, but the tendency for heaping at the digit 0 and, to a slighter extent, at digit 5, at ages 30 and over, were common. Age misstatement affecting the division into 5-year age groups were tested, in several cases where the age distribution appeared to be badly distorted, to ascertain their affect on the proportions single derived from the census data. The following is an example of one test.

1911 Census -- Males

Age	Numbers
28	11,498
29	10,364
30	11,845
31	9,307
32	1,072

An average of numbers at ages 28, 29, 31, and 32 gave a corrected total of 10,336 at 30 years. Assuming that the persons who mistakenly gave their age as 30 were either 29 or 31, a graph was drawn through the numbers at 28, the corrected total at 30 and 32 years. By interpretation, corrected numbers of 10,900 at 29 and 10,280 at 31 were obtained. This decided the transference of 536 persons from the 30-34 to the 25-29 age graph. The marital status of those transferred, giving 281 persons to be subtracted from the number of single persons at 30-34 and added to those at 25-29. The following are the revised figures.

Age Groups	No. Single	Total	Proportion Single	Unrevised Proportion Single
25-29	35,332	54,996	64.3	64.5
30-34	19,636	48,679	40.3	40.5

The transfer of 1,000 persons would have yielded the revised proportions of 64.3 and 40.2, respectively. On the basis of such tests, it was decided that the difference made to the proportions single, even where the transfer of large numbers from one age group to another was involved, was insufficient to warrant adjustments for ages in the basic data, particularly when the assumptions on which these revisions were based could themselves be erroneous.

SELECTED BIBLIOGRAPHY

New Zealand Official Statistics

Results of a Census of the Colony of New Zealand. Wellington: Government Printer.

1881 Pt. II, Ages of the People
III, Conjugal Condition of the People
1886 II, Ages of the People
V, Conjugal Condition of the People
1891 IV, Ages of the People
V, Conjugal Condition of the People
1896 IV, Ages of the People
V, Conjugal Condition of the People
1901 IV, Ages of the People
V, Conjugal Condition of the People
1906 IV, Ages of the People
V, Conjugal Condition of the People

Results of a Census of the Dominion of New Zealand. Wellington: Government Printer.

1911 Pt. IV, Ages of the People
V, Conjugal Condition of the People
1916 II, Ages
VII, Conjugal Condition
VIII, Fertility
1921 II, Ages
IX, Conjugal Condition
X, Fertility

Dominion of New Zealand. Population Census. Wellington: Government Printer.

1926 Pt. III, Ages
IV, Conjugal Condition
IX, Industrial and Occupational Distribution
XII, Families and Households

New Zealand Population Census. Wellington: Government Printer.

1936 Vol. I, Increase and Location of Population
IV, Ages and Marital Status
X, Industries and Occupations
Appendix D. Life Tables
1945 Vol. I, Increase and Location of Population
IV, Ages and Marital Status
IX, Industries and Occupations
1951 Vol. I, Increase and Location of Population

II, Ages and Marital Status
IV, Industries, Occupations and Incomes
Appendix B. Life Tables 1950-52 and Values of Annuities
1956 Vol I, Increase and Location of Population
II, Ages and Marital Status
IV, Industries and Occupations
Appendix B. N.2. Life Tables 1955-57
1961 Vol. I, Increase and Location of Population
2, Ages and Marital Status
3, Industries and Occupations
Appendix B. New Zealand Life Tables 1960-62

New Zealand Census of Population and Dwellings. Wellington: Government Printer.
1966 Vol. 1, Increase and Location of Population
2, Ages and Marital Status
4, Industries and Occupations
Appendix B. New Zealand Life Tables and Life Annuity Tables 1965-57

New Zealand Official Year Book. Wellington: Government Printer, 1893-1970.
Annual publication except for following: 1921-22; 1947-49; 1951-52.

Statistics of New Zealand, ann. Wellington: Government Printer, 1853-1920.
1853-1920, Pt. II, Population and Vital Statistics
V, Law, Crime and Education

Monthly Abstract of Statistics. Wellington: Government Printer, October, 1914 _____.

Report on the Justice Statistics, ann. Wellington: Government Printer, 1921-42.

Report on the Social Statistics, ann. Wellington: Government Printer, 1943-45.

Report on Justice Statistics, ann. Wellington: Government Printer, 1946 - .

Report on the Medical Statistics, ann. Wellington: Government Printer, 1948 - .
Previously published in Report on Vital Statistics from 1873.
1945-47, inclusive, not published.

Statistical Report on Population and Buildings, ann. Wellington: Government Printer, 1922-23 to 1952-53.
Incorporated the Report on External Migration, formerly published as a separate volume from 1933-34.

Report on Population, Migration and Building Statistics, ann. Wellington: Government Printer, 1953-54 --.

Report on Prices, Wages and Labour Statistics. Wellington: Government Printer, 1943-46; 1946; 1948; 1949-51; 1951-53; 1953 _____.

Report on the Vital Statistics, ann. Wellington: Government Printer, 1921 --. Combined report for 1962-63.

Trends in Health and Health Services. Occasional Publication, Department of Health. Wellington: Government Printer, 1968; 1969; 1972; 1975.

Widowhood and Remarriage of Widows, 1965-67. Wellington: Government Printer, 1970.

A previous analysis of remarriage and length of widowhood for the 1955-56 period was published by the Department of Statistics in 1961 as a special supplement to the Monthly Abstract of Statistics.

New Zealand: Demography and Society

Baker, J. V. T. The New Zealand People at War. War Economy. Wellington: Historical Publications Branch, Department of Internal Affairs, 1965.

Basavarajappa, K. G. "Recent Trends and Patterns of Non-Maori Fertility in New Zealand." Journal of Biosocial Science 1 (1969): 101-08.

Beaglehole, J. C. New Zealand: A Short History. London: George Allen and Unwin, 1936.

Burdon, R. M. The New Dominion: A Social and Political History of New Zealand, 1918-39. Wellington: A. H. and A. W. Reed, 1965.

Calvert, G. N. The Future Population of New Zealand: A Statistical Analysis, mimeo. Wellington: The Treasury, 1946.

Condliffe, J. B. New Zealand in the Making, 2nd ed. rev., 2nd imp. London: George Allen and Unwin Ltd., 1963.

_____. The Welfare State in New Zealand. London: George Allen and Unwin Ltd., 1959.

Congalton, A. A., and Havighurst, R. G. "Status Ranking of Occupations in New Zealand." Australian Journal of Psychology 6 (June 1954): 10-16.

Forster, John, ed. Social Process in New Zealand. Auckland: Longman Paul, 1969.

Franklin, S. H. "New Zealand's Population in the Welfare Era, 1901-61." In Land and Society in New Zealand, pp. 160-87. Edited by R. Watters. Wellington: Reed, 1965.

Gilson, Miriam. "The Changing New Zealand Family." In Association for the Study of Childhood. The New Zealand Family and Child Development, pp. 72-75. Wellington: New Zealand University Press, 1969.

_____. "The Changing New Zealand Family: A Demographic Analysis." In Marriage and the Family in New Zealand, pp. 41-65. Edited by Stewart Houston. Wellington: Sweet and Maxwell, 1970.

_____. "Population Growth in Post-War New Zealand." In Social Process in New Zealand, pp. 29-48. Edited by John Forster. Auckland: Longman Paul, 1969.

_____. "Women in Employment." In Social Process in New Zealand, pp. 183-97. Edited by John Forster. Auckland: Longman Paul, 1969.

Hall, Elaine M. Fertility and Size of Settlement in New Zealand. Unpublished M.A. thesis. Auckland University, 1969.

Hargreaves, R. P., and Heenan, L. D. P. An Annotated Bibliography of New Zealand Population. Dunedin: University of Otago Press, 1972.

Department of Health. Family Growth Study. Special Report Series No. 48. Wellington: Government Printer, 1976.

Houston, Stewart, ed. Marriage and the Family in New Zealand or Eros Marooned. Wellington: Sweet and Maxwell, 1970.

Interdepartmental Report on Ex-Nuptial Births. Wellington, 1969. Xeroxed.

Jacoby, E. G. "A Fertility Analysis of New Zealand Marriage Cohorts." Population Studies 12, No. 1 (1958): 18-39.

_____. "Some Demographic Observations on First Order Births in the Light of the Cohort Approach." The Economic Record 37, No. 79 (September 1961): 308-19.

Koopman-Boyden, Peggy G. "Bibliography of the New Zealand Family." Research Project No. 25. Christchurch: Department of Psychology and Sociology, University of Canterbury, 1975.

Lancaster, H. O., and Donovan, J. W. "A Study in New Zealand Mortality. 1. Population Data." New Zealand Medical Journal 65 (1966): 946-53.

Lancaster, H. O., and Donovan, J. W. "A Study in New Zealand Mortality. 2. Mortality Data." New Zealand Medical Journal 66 (1969): 769-77.

McLintock, A. H., ed. An Encyclopedia of New Zealand. 3 vols. Wellington: Government Printer, 1966.

The New Zealand Family and Child Development. The 1968 lectures delivered to the Association for the Study of Childhood. Wellington, New Zealand. Wellington: New Zealand University Press, 1969.

Nixon, A. J. Divorce in New Zealand. Bulletin 46, Sociology Series I. Auckland: Auckland University College, 1954.

Oliver, W. H. The Story of New Zealand. London: Faber and Faber, 1960.

"Report of the Dominion Population Committee, 1946." Appendices to the Journal of the House of Representatives, Paper 1-17. Wellington: Government Printer, 1946.

Robb, J. H. "Decentralization and the Citizen." In Decentralization in New Zealand Government Administration, pp. 35-55. Edited by J. L. Roberts. Wellington: New Zealand Institute of Public Administration, 1961.

Robb, J. H., and Cloud, Jonathan. "Occupational Mobility in a New Zealand Provincial Borough." The Australian and New Zealand Journal of Sociology 6, No. 1 (1970): 49-51.

Roberts, J. L., ed. Decentralization in New Zealand Government Administration. Wellington: New Zealand Institute of Public Administration, 1961.

Report of the Labour Committee to the National Development Conference. Wellington: Government Printer, 1969.

Report of the Royal Commission for Inquiry into Compensation for Personal Injury in New Zealand. Wellington: Government Printer, 1967.

Rosenberg, W. "The Relationship Between Size of Families and Incomes in New Zealand 1949-50 to 1953-54." Economic Record 34 (1958): 260-64.

Ross, A. A. Some Reflections on an Examination of the Marriage Registers of St. John's Presbyterian Church, Papatoetoe for the period 1855-1961. Unpublished manuscript.

Sinclair, Keith. A History of New Zealand. Rev. ed. Harmondsworth: Penguin Books, 1969.

A Survey of New Zealand Population. Wellington: Government Printer, 1960.

Sutch, W. B. Poverty and Progress in New Zealand. Wellington: Reed, 1969.

_____. The Quest for Security in New Zealand 1840 to 1966. Wellington: Oxford University Press, 1966.

Vandenberg, M., McCreary, J., and Chapman, M. A Social Survey of Hamilton. Wellington: Department of Social Science, Victoria University, 1965.

Vellekoop, Cora. "Social Strata in New Zealand." In Social Process in New Zealand, pp. 233-71. Edited by John Forster. Auckland: Longman Paul, 1969.

Vosburgh, Miriam Gilson. Some Social and Demographic Influences on New Zealand Family Structure from 1886. Ph.D. thesis, Victoria University of Wellington, 1971.

Webb, Stephen D., and Collette, John, eds. New Zealand Society: Contemporary Perspectives. Sydney: John Wiley and Sons Australasia Pty. Ltd., 1973.

Wise's New Zealand Post Office Directory, Volume 2, Wellington City, 1965-66.

Non-New Zealand Sources

Akers, Donald S. "On Measuring the Marriage Squeeze." Demography 4, No. 2 (1967): 907-24.

Anastasi, Anne. "Intelligence and Family Size." Psychological Bulletin 53 (May 1956): 187-209.

Banks, J. A. Prosperity and Parenthood. London: Routledge and Kegan Paul, 1954.

Barclay, George W. Techniques of Population Analysis. 4th imp. New York: John Wiley and Sons, Inc., 1963.

Basavarajappa, K. G. "The Influence of Fluctuations in Economic Conditions on Fertility and Marriage Rates, Australia, 1920-21 to 1937-38 and 1946-47 to 1966-67." Population Studies 25, No. 1 (March 1971): 39-53.

_____. "Pre-Marital Pregnancies and Ex-Nuptial Births in Australia." Australian and New Zealand Journal of Sociology 4, No. 2 (1968): 126-45.

Bell, Norman W., and Vogel, Ezra F., eds. A Modern Introduction to the Family. Illinois: The Free Press of Glencoe, 1960.

Bell, Wendell. "The Utility of the Shevky Typology for the Design of Urban Sub-Area Field Studies." In Studies in Human Ecology, pp. 244-52. Edited by George A. Theodorson. Evanston: Row Peterson, 1961.

Berelson, Bernard B., et al., eds. Family Planning and Population Programs. Chicago: University of Chicago Press, 1966.

Berent, Jerzy. "Causes of Fertility Decline in Eastern Europe and the Soviet Union." Pt. 1, Population Studies 24, No. 1 (March 1970): 35-58; and Pts. 2 and 3, Population Studies 24, No. 2 (July 1970): 247-92.

Bernard, Jessie. Remarriage: A Study of Marriage. New York: The Dryden Press, 1956.

Beshers, J. M. Population Processes in Social Systems. New York: Free Press, 1967.

Blacker, C. P. "Stages in Population Growth." Eugenics Review 39 (1947): 88-102.

Blake, Judith. "The Americanization of Catholic Reproductive Ideals." Population Studies 20, No. 1 (1966): 27-43.

_____. "Demographic Science and the Redirection of Public Policy." Journal of Chronic Diseases 18 (November 1965): 1181-1200.

_____. "Ideal Family Size Among White Americans: A Quarter of a Century's Evidence." Demography 3 (1966): 154-73.

_____. "Income and Reproductive Motivation." Population Studies 21, No. 3 (November 1967): 185-206.

_____. "Parental Control, Delayed Marriage and Population Policy." Population Report Series, No. 238 from Proceedings of the World Population Conference, II (1965): 132-36.

_____. "Reproductive Ideals and Educational Attainment Among White Americans, 1943-60." Population Studies 21, No. 2 (September 1967): 159-74.

Blalock, Hubert M. J. Social Statistics. New York: McGraw Hill Book Co., Inc., 1960.

Bogue, Donald J. Principles of Demography. London: John Wiley and Sons, Inc., 1969.

Borrie, W. D. "Australian Family Structure: Demographic Observations." In Marriage and the Family in Australia, pp. 1-23. Edited by A. P. Elkin. Sydney: Angus and Robertson, 1957.

Borrie, W. D., and Spencer, Geraldine. Australia's Population Structure and Growth. Melbourne: Committee for Economic Development of Australia, 1954.

Bossard, James H. S., and Boll, Eleanor S. The Large Family System. Philadelphia: University of Pennsylvania Press, 1956.

Bossard, James H. C., and Boll, Eleanor S. The Sociology of Child Development. 4th ed. New York: Harper and Row, 1966.

Bott, Elizabeth. Family and Social Network. 2nd imp. London: Tavistock Publications, 1964.

Bumpass, Larry. "Age at Marriage as a Variable in Socio-Economic Differentials in Fertility." Demography 6, No. 1 (February 1969): 45-54.

Burch, Thomas K. "The Fertility of North American Catholics: A Comparative Review." Demography 3, No. 1 (1966): 176-87.

Bynder, Herbert. "Emile Durkheim and the Sociology of the Family." Journal of Marriage and the Family 31, No. 3 (August 1969): 527-33.

Chambliss, Rollin. "Median Age at First Marriage in Sweden, 1881-1953." Milbank Memorial Fund Quarterly 35, No. 3 (July 1957): 280-86.

Cho, Lee-Jay. "Income and Differentials in Current Fertility." Demography 5, No. 1 (1968): 198-211.

Cho, Lee-Jay; Grabill, Wilson H.; and Bogue, Donald J. Differential Current Fertility in the United States. Chicago: Community and Family Study Center, University of Chicago, 1970.

Chow, Ru-Chi, and Brown, Susannah. "A Comparison of the Size of Families of Roman Catholics and non-Catholics in Great Britain." Population Studies 22, No. 1 (1968): 51-60.

Christensen, Harold T., ed. Handbook of Marriage and the Family. Chicago: Rand McNally and Co., 1964.

Coale, Ansley, and others. Aspects of the Analysis of Family Structure. Princeton: Princeton University Press, 1965.

Collver, O. Andrew. "Women's Work Participation and Fertility in Metropolitan Areas." Demography 5, No. 1 (1968): 55-60.

Coontz, Sydney H. Population Theories and the Economic Interpretation. London: Routledge and Kegan Paul, 1961.

Coser, Rose L., ed. The Family: Its Structure and Functions. New York: St. Martins Press, 1964.

Davis, James A. Elementary Survey Analysis. Englewood Cliffs: Prentice-Hall, Inc., 1971.

Davis, Kingsley. "The Sociology of Demographic Behavior." In Sociology Today: Problems and Prospects, pp. 309-33. Edited by Robert K. Merton, Leonard Broom, and Leonard S. Cottrell, Jr. New York: Basic Books, Inc., 1959.

_____. "The Theory of Change and Response in Modern Demographic History." Population Index 24, No. 4 (1963): 345-66.

Davis, Kingsley, and Blake, Judith. "Social Structure and Fertility: An Analytical Framework." Economic Development and Cultural Change 4 (1956): 211-35.

Davis, Kingsley, and Blake, Judith. "Theory of Determinants of Age at Marriage." Population Index abstract 28, No. 3 (1962): 228-29.

Day, Lincoln H. "Differentials in Age of Women at Completion of Childbearing in Australia." Population Studies 28, No. 3 (March 1965): 251-63.

_____ _. "Divorce." In Australian Society: A Sociological Introduction, 2nd. ed., pp. 292-300. Edited by A. F. Davies and S. Encel. Melbourne: Cheshire, 1970.

_____. "Patterns of Divorce in Australia and the United State." Rep. in Kinship and Family Organization, pp. 339-53. Edited by Bernard Farber. New York: John Wiley and Sons, 1966.

_____. "Family Size and Fertility." In Australian Society: A Sociological Introduction, 2nd ed., pp. 16-30. Edited by A. F. Davies and S. Encel. Melbourne: Cheshire, 1970.

Day, Lincoln H., and Day, Alice T. "Family Size in Industrialized Countries: An Inquiry into the Social-Cultural Determinants of Levels of Child-bearing." Journal of Marriage and the Family 21, No. 2 (1969): 242-51.

Dixon, Ruth B. "Explaining Cross-Cultural Variations in Age at Marriage and Proportions Never Marrying." Population Studies 25, No. 2 (July 1971): 215-33.

Dublin, Louis I.; Lotka, Alfred J.; and Spiegelman, Mortimer. Length of Life: A Study of the Life Table. Rev. ed. New York: The Ronald Press Co., 1949.

Duncan, Otis D. "Farm Background and Differential Fertility." Demography 2 (1965): 240-49.

Easterlin, Richard A. "The American Baby Boom in Historical Perspective." In Readings on Population, pp. 120-56. Edited by D. M. Heer. Englewood Cliffs: Prentice-Hall, Inc., 1968.

Elkin, A. P., ed. Marriage and the Family in Australia. Sydney: Angus and Robertson, 1957.

The Family: Report of the British National Conference on Social Work at Bedford College for Women, London, 1953. London: The National Council for Social Service, Inc., 1953.

Farber, Bernard. Family Organization and Interaction. San Francisco: Chandler Publishing Co., 1964.

Farber, Bernard, ed. Kinship and Family Organization. New York: John Wiley and Sons, Inc., 1966.

Farber, Seymour M.; Mustacchi, Piero; and Wilson, Roger H. L., eds. Man and Civilization: The Family's Search for Survival. New York: McGraw-Hill, 1965.

Fletcher, Ronald. The Family and Marriage in Britain. Rev. ed. Harmondsworth: Penguin Books, Ltd., 1966.

Ford, Thomas R., and DeJong, Gordon F., eds. Social Demography. Englewood Cliffs: Prentice-Hall, Inc., 1970.

Freedman, Ronald. "The Sociology of Human Fertility: A Trend Report and Bibliography." Current Sociology 10/11 (1961-62): 35-42 and 58-68.

_____. "The Transition from High to Low Fertility: A Challenge to Demographers." Population Index 31, No. 4 (1965): 417-35.

Freedman, Ronald; Baumert, Gerhard; and Bolte, Martin. "Expected Family Size and Family Values in West Germany." Population Studies 13 (1959-60): 136-50.

Freedman, Ronald, and Coombs, Lolagene. "Economic Considerations in Family Growth Decisions." Population Studies 20, No. 2 (1966): 197-222.

Freedman, Ronald, and Coombs, Lolagene. "Pre-Marital Pregnancy, Child-spacing and Later Economic Achievement." Population Studies 24, No. 3 (November 1970): 389-412.

Freedman, Ronald; Coombs, Lolagene C.; and Bumpass, Larry. "Stability and Change in Expectations about Family Size." Demography 2 (1965): 250-75.

Freedman, Ronald, and Slesinger, Doris P. "Fertility Differentials for the Indigenous Non-Farm Population of the United States." Population Studies 15 (1961): 161-73.

Freedman, Ronald; Whelpton, Pascal K.; and Campbell, Arthur A. Family Planning, Sterility and Population Growth. New York: McGraw-Hill, 1959.

Fruchter, Benjamin. Introduction to Factor Analysis. Princeton: D. Van Nostrand Co., Inc., 1954.

Galbraith, V. L., and Thomas, Dorothy S. "Birthrates and the Interwar Business Cycles." Journal of the American Statistical Association 36, No. 216 (1941): 465-76.

Gavron, Hannah. The Captive Wife. London: Routledge and Kegan Paul, 1966.

Gendell, Murray. Swedish Working Wives: A Study of Determinants and Consequences. New York: Bedminster Press, 1963.

Glass, David V. "Family Planning Programmes and Action in Western Europe." Population Studies 19, No. 3 (March 1966): 221-38.

_____. "Fertility Trends in Europe Since the Second World War." Population Studies 22, No. 1 (1968): 103-46.

Glass, David V., and Eversley, D. E. C., eds. Population in History. London: Edward Arnold (Publishers) Ltd., 1965.

Glass, D. V., and Grebenik, E. The Trend and Pattern of Fertility in Great Britain. A Report on the Family Census of 1946. (Papers of the Royal Commission on Population, VI). London: H. M. S. O., 1954.

Glick, Paul C. American Families. New York: John Wiley and Sons, 1957.

_____. "Family Statistics." In The Study of Population: An Inventory and Appraisal, pp. 576-603. Edited by Philip M. Hauser and O. D. Duncan. Chicago: University of Chicago Press, 1959.

_____. "Permanence of Marriage." Population Index 33, No. 4 (1967): 517-26.

Glick, Paul C., and Parke, Robert Jnr. "New Approaches in Studying the Life Cycle of the Family." Demography 2 (1965): 187-202.

Goldberg, David. "Fertility and Fertility Differentials: Some Observations on Recent Changes in the United States." In Public Health and Population Change, pp. 119-42. Edited by Mendel C. Sheps and Jeanne C. Ridley. Pittsburgh: University of Pittsburgh Press, 1965.

_____. "Fertility of Two-Generation Urbanites." Population Studies 12, No. 3 (March 1959): 214-22.

Goldberg, David; Sharp, Harvey; and Freedman, Ronald. "The Stability and Reliability of Expected Family Size Data." Milbank Memorial Fund Quarterly 37, No. 4 (October 1959): 369-85.

Goode, William J. After Divorce. Illinois: Free Press of Glencoe, 1956.

_____. The Family. Englewood Cliffs: Prentice-Hall, Inc., 1964.

_____. "The Sociology of the Family." In Sociology Today: Problems and Prospects, pp. 178-96. Edited by Robert K. Merton, Leonard Broom, and Leonard S. Cottrell, Jr. New York: Basic Books, Inc., 1959.

_____. World Revolution and Family Patterns. New York: Glencoe Free Press, 1963.

Goode, William J., ed. Readings on the Family and Society. Englewood Cliffs: Prentice-Hall, Inc., 1964.

Grabill, Wilson H., Davidson, Maria. "Recent Trends in Childspacing Among American Women." Demography 5, No. 1 (1968): 212-25.

Grabill, Wilson H.; Kiser, Clyde V.; and Whelpton, Pascal K. The Fertility of American Women. New York: John Wiley and Sons, 1958.

Gustavus, Susan O., and Nam, Charles B. "The Formation and Stability of Ideal Family Size Among Young People." Demography 7, No. 1 (February 1970): 43-51.

Hajnal, John. "Age at Marriage and Proportions Marrying." Population Studies 7 (1953-54): 111-36.

_____. "European Marriage Patterns In Perspective." In Population in History, pp. 101-43. Edited by D. V. Glass and D. E. C. Eversley. London: Edward Arnold, 1965.

_____. "The Marriage Boom." In Demographic Analysis, pp. 220-42. Edited by Joseph J. Spengler and Otis Dudley Duncan. New York: Free Press of Glencoe, 1963.

Harbison, Frederick; and Myers, Charles A. Education, Manpower and Economic Growth. New York: McGraw-Hill, 1964.

Heer, David M. "Fertility Differences Between Indian and Spanish-Speaking Parts of the Andean Countries." Population Studies 18 (1964): 71-84.

_____. Society and Population. Englewood Cliffs: Prentice-Hall, Inc., 1968.

Hill, Reuben. "Research on Human Fertility." International Social Science Journal 20, No. 2 (1968): 226-62.

_____. "The Significance of the Family in Population Research." In Family and Fertility, pp. 3-22. Edited by William T. Liu. Notre Dame: University of Notre Dame Press, 1967.

Hollingshead, August B. "Age Relationships and Marriage." American Sociological Review 16, No. 4 (1951): 492-99.

Johnson, Gwendolyn Z. "Differential Fertility in European Countries." In Demographic and Economic Change in Developed Countries (National Bureau of Economic Research), pp. 36-76. Princeton: Princeton University Press, 1960.

Kelsall, R. K. Population. Aspects of Modern Sociology. The Social Structure of Modern Britain. London: Longmans, Green and Co. Ltd., 1967.

Kirk, Dudley. "The Influence of Business Cycles on Marriage and Birth Rates." In Demographic and Economic Change in Developed Countries (National Bureau of Economic Research). Princeton: Princeton University Press, 1960.

Kiser, Clyde V., ed. Research in Family Planning. Princeton: Princeton University Press, 1962.

Kiser, Clyde V.; Grabill, Wilson H.; and Campbell, Arthur A. Trends and Variations in Fertility in the United States. Cambridge: Harvard University Press, 1968.

Klein, Viola. Britain's Married Women Workers. London: Routledge and Kegan Paul, 1965.

Laslett, Peter. "Size and Structure of the Household in England over Three Centuries." Population Studies 23, No. 2 (July 1969): 119-223.

Liu, William T., ed. Family and Fertility. Notre Dame: University of Notre Dame Press, 1967.

McArthur, Norma. Introducing Population Statistics. Melbourne: Oxford University Press, 1961.

McGregor, O. R. Divorce in England: A Centenary Study. London: Heinemann, 1957.

_____. "Towards Divorce Law Reform." British Journal of Sociology 18 (1967): 91-98.

Marwick, M. G. "The Comparative Sociology of Divorce." In Divorce, Society and the Law (A Symposium arranged by the Faculty of Law, Monash University), pp. 87-109. Edited by H. A. Finlay. Melbourne: Butterworth and Co. (Australia) Ltd., 1969.

Matras, Judah. "Social Strategies of Family Formation: Data for British Female Cohorts born 1831-1906." Population Studies 19, No. 2 (November 1965): 167-81.

_____. "Social Strategies of Family Formation: Some Comparative Data for Scandinavia, the British Isles and North America." International Social Science Journal 17, No. 2 (1965): 260-75.

_____. "The Social Strategy of Family Formation: Some Variations in Time and Space." Demography 2 (1965): 349-62.

Mauldin, Parker. "Applications of Survey Techniques to Fertility Studies." In Public Health and Population Change, pp. 93-119. Edited by M. C. Sheps and J. C. Ridley. Pittsburgh: University of Pittsburgh Press, 1965.

Milbank Memorial Fund. Emerging Techniques in Population Research. Proceedings of the 1962 Milbank Round Table. New York: Milbank Memorial Fund, 1963.

_____. Thirty Years of Research in Human Fertility: Retrospect and Prospect. New York: Milbank Memorial Fund, 1959.

Moss, J. Joel. "Teen-Age Marriage: Cross-National Trends and Sociological Factors in the Decision of When To Marry." Journal of Marriage and the Family 27, No. 2 (May 1965): 230-42.

Murdock, George Peter. Social Structure. New York: The Macmillan Co., Free Press Paperback Edition, 1965.

National Opinion Center. "Jobs and Occupations: A Popular Evaluation." In Class, Status and Power, pp. 411-26. Edited by Reinhard Bendix and Seymour M. Lipset. London: Routledge and Kegan Paul, 1954.

Nye, F. Ivan, and Berardo, Felix M. Emerging Conceptual Frameworks in Family Analysis. New York: The Macmillan Co., 1966.

Oppenheimer, Valerie K. "The Interaction of Demand and Supply and Its Effect on the Female Labour Force in the United States." Population Studies 21, No. 3 (November 1967): 239-59.

Parsons, Talcott, and Bales, Robert F. Family Socialization and Interaction Process. London: Routledge and Kegan Paul, 1956.

Perrucci, Carolyn Cummings. "Mobility, Marriage and Child-Spacing Among College Graduates." Journal of Marriage and the Family 30, No. 2 (1968): 273-82.

Queen, Stuart A.; Habenstein, Robert W.; and Adams, John B. The Family in Various Cultures. Rev. ed. Chicago, Philadelphia, New York: J. B. Lippincott Co., 1961.

Rele, J. R. "Some Correlates of the Age at Marriage in the United States." Eugenics Quarterly 12 (March 1965): 1-6.

Ridley, Jeanne C. "Number of Children Expected in Relation to Non-Familial Activities of the Wife." Milbank Memorial Fund Quarterly 37, No. 3 (1959): 277-96.

Rogoff, Natalie. "Recent Trends in Urban Occupational Mobility." In Cities and Society, pp. 432-45. Edited by Paul K. Hatt and Albert J. Reiss. New York: Free Press, 1957.

Rosen, Bernard C., and Simmons, Alan B. "Industrialization, Family and Fertility: A Structural-Psychological Analysis of the Brazilian Case." Demography 8, No. 1 (February 1971): 49-69.

Rosser, Colin, and Harris C. The Family and Social Change: A Study of Family and Kinship in a South Wales Town. London: Routledge and Kegan Paul, 1965.

Rowntree, Griselda. "Some Aspects of Marriage Breakdown in Britain During the Last Thirty Years." Population Studies 18, No. 2 (November 1964): 147-63.

Rowntree, Griselda, and Pierce, Rachael. "Birth Control in Great Britain." Population Studies 15 (July 1961): 3-31.

Ryder, Norman B. "The Character of Modern Fertility." The Annals of the Academy of Political and Social Science 369 (January 1967): 26-36.

_____. "Fertility." In The Study of Population: An Inventory and Appraisal, pp. 400-35. Edited by Philip M. Hauser and O. D. Duncan. Chicago: University of Chicago Press, 1959.

_____. "The Cohort as a Concept in the Study of Social Change." American Sociological Review 30 (December 1965): 843-61.

Sagi, P., and Westoff, C. "An Exercise in Partitioning Some Components of the Variance in Family Size." In Emerging Techniques in Population Research, pp. 130-40. New York: Milbank Memorial Fund, 1963.

Sheps, Mindel C., and Ridley, Jeanne C., eds. Public Health and Population Change. Pittsburgh: University of Pittsburgh Press, 1965.

Simon, Julian L. "The Effect of Income on Fertility." Population Studies 33, No. 3 (November 1969): 327-41.

Spengler, Joseph J. "Values and Fertility Analysis." Demography 3, No. 1 (1966): 109-30.

Spiegelman, Mortimer. Introduction to Demography. Rev. ed. Cambridge: Harvard University Press, 1968.

Stephens, William N. The Family in Cross-Cultural Perspective. New York: Holt, Rinehart and Winston, 1963.

Still, Elizabeth. "The Fashion for Families." New Society 245 (June 1967): 836-37.

Strodtbeck, Fred L., and Greelan, Paul G. "The Interaction Linkage between Family Size and Sex-Role Identity." In Family and Fertility, pp. 113-29. Edited by William T. Liu. Notre Dame and London: University of Notre Dame Press, 1967.

Stolka, Susan M., and Barnett, Larry D. "Education and Religion as Factors in Women's Attitudes Motivating Childbearing." Journal of Marriage and the Family 31, No. 4 (November 1969): 740-50.

Stycos, J. Mayone, and Weller, Robert H. "Female Working Roles and Fertility." Demography 4, No. 1 (1967): 210-17.

Sussman, Marvin. Sourcebook on Marriage and the Family. Boston: Houghton Mifflin, 1963.

Sweet, James. A. "Family Composition and the Labor Force Activity of American Wives." Demography 7, No. 2 (May 1970): 195-209.

Tien, H. Yuan. Social Mobility and Controlled Fertility. New Haven: College and University Press Service, 1965.

Thompson, Warren S. Population and Peace in the Pacific. Chicago: University of Chicago Press, 1946.

Thompson, Warren S., and Lewis, David T. Population Problems. 5th Ed. New York: McGraw-Hill Book Co., 1965.

United Nations. The Determinants and Consequences of Population Trends. New York: United Nations, 1953.

United States Bureau of the Census. Statistical Abstract of the United States: 1969. Washington, D.C., 1969.

Weller, Robert H. "The Employment of Wives, Dominance and Fertility." Journal of Marriage and the Family 30, No. 3 (August 1968): 437-42.

Westoff, Charles F.; Mishler, Elliot G.; and Kelly, Lowell E. "Preferences in Size of Family and Eventual Fertility Twenty Years After." American Journal of Sociology 42, No. 5 (March 1957): 491-97.

Westoff, Charles F.; Potter, Robert G., Jr.; Sagi, Philip C.; and Mishler, Elliot G. Family Growth in Metropolitan America. Princeton: Princeton University Press, 1961.

Westoff, Charles F.; Potter, Robert G., Jr.; and Sagi, Philip C. The Third Child. Princeton: Princeton University Press, 1963.

Whelpton, Pascal K. "Trends andDifferentials in the Spacings of Births." Demography 1, No. 1 (1964): 83-93.

Whelpton, Pascal K.; Campbell, Arthur A.; and Patterson, John E. Fertility and Family Planning in the United States. Princeton: Princeton University Press, 1966.

Whelpton, Pascal K., and Kiser, Clyde V. Social and Psychological Factors Affecting Fertility. Vols. II, III, IV, and V. New York: Milbank Memorial Fund, 1950.

Winch, Robert F. The Modern Family. New York: Holt, Rinehart and Winston, 1963.

Winch, Robert F., and Goodman, Louis Wolf, eds. Selected Studies in Marriage and the Family. 3rd Ed. New York: Holt Rinehart and Winston, Inc., 1968.

Wrigley, E. A. Population and History. World University Library. London: Weidenfeld and Nicholson, 1969.

Wrong, Dennis H. Population and Society. 3rd Ed. New York: Random House, 1967.

Young, Michael, and Willmott, Peter. Family and Kinship in East London. Rev. Ed. Harmondsworth: Penguin Books Ltd., 1962.

Zimmer, Basil G., and Goldscheider, Calvin. "A Further Look at Catholic Fertility." Demography 3, No. 2 (1966): 462-69.